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THE RELATIONSHIP OF SOCIOECONOMIC FACTORS, EDUCATIONAL LEADERSHIP PATTERNS AND ELEMENTS OF COMMUNITY POWER STRUCTURE TO LOCAL SCHOOL FISCAL POLICY. FINAL REPORT.

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In a study of the critical factors affecting local decision making on school fiscal policy, socioeconomic factors, educational leadership, and community power structure were related to one another and to local financial effort in relation to ability. The study included 122 school districts of 20,000 population and above located in the states of Florida, Georgia, Kentucky, and Illinois. Twenty-four districts (three highand three low effort districts from each state) were selected for intensive study. The 12 major hypotheses tested dealt with consistency of local school fiscal policy, the relationship of socioeconomic factors and kinds of community power structures to effort, and the characteristics of community leaders and voter behavior in competitive and noncompetitive power structures. Principal findings included: (1) Most school districts followed consistently high or low effort patterns throughout the 18 years studied, (2) there was no consistent relationship between socioeconomic factors and financial effort, (3) low financial effort districts tended to have noncompetitive power structures, and (4) low effort, noncompetitive districts tended to have closed social systems with politically less active voters. (Author/JK)

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U. S. DEPARTMENT OF
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Roe L. Johns

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R. L. J.
R. B. K.

SUMMARY

This is a fundamental study through time and in depth of critical factors affecting local decision-making on school fiscal policy. It brought together in one design, methods for investigating the interrelationships of socioeconomic factors, educational leadership and community power structure, and the relationship of these factors to local financial effort in relation to ability.

Objectives

Answers were sought to the following questions: (a) Have most school districts in selected states followed relatively consistent patterns of local school fiscal policy as measured by local effort in relation to ability? (b) What socioeconomic factors are associated with effort in relation to ability? (c) What unusual changes in fiscal policy have occurred through time in school districts in selected states? (d) Are such factors as social power exchanges, economic changes, and changes in educational leadership activities related to changes in local school fiscal policy? (e) What relationships do the characteristics of community power structure (e.g., monopolistic, competitive, pluralistic) have with the level of local financial effort? (f) What relationships do the characteristics of educational leadership have with observed variations in effort? (g) How are certain socioeconomic beliefs among the population, power wielders, and teachers in selected school districts related to financial effort? (h) Do economic beliefs have a closer relationship than educational beliefs to liberal or conservative fiscal policies among selected school districts?

Procedures

The first step was to analyze the patterns of fiscal policy in all

districts of 20,000 population or more in selected states through time in terms of effort in relation to ability and in terms of elasticity of demand for education. The states of Florida, Georgia, Kentucky and Illinois were selected for the study. The relationships of socioeconomic factors to those patterns were studied. This background analysis was also used (a) to identify districts which had experienced substantial changes in fiscal policy (b) to identify the districts which at the time of the study were making the highest and lowest effort in relation to ability.

The second step was to identify the factors associated with change in fiscal policy in school districts in the selected states.

The third step was to make an intensive analysis of the districts making the highest and the lowest local financial effort to support schools at the present time. Three of the highest financial effort and three of the lowest financial effort school districts above 20,000 in total population were selected in each of the states studied, making a total sample of twenty four districts. An assessment of the power system in each school district was made and the relationship between certain behavioral and socioeconomic elements of power and financial effort among the districts determined. The characteristics of local power structure and decision-making was determined by an adaptation of the power attribution and decision analysis techniques. The leadership activities of school administrators was determined through the use of the decision-analysis technique. The Florida Scale of Civic Beliefs and an education beliefs scale was administered to the most influential power wielders, a sample of the teachers, and a sample of the population.

Principal Findings

Some of the more important findings are presented below under the principal hypotheses tested.

Hypothesis 1. Most of the districts selected for study have followed relatively consistent patterns of financial effort and elasticity of demand for education over a period of years. The first part of this hypothesis was confirmed. It was found that 88 of the 122 districts studied followed relatively consistent effort patterns during the 18 year period of time studied. That is the high effort districts continued as high effort districts throughout the period of time studied as compared with the state median effort, low effort districts were generally consistently low effort districts and most median effort districts were consistently median effort districts. However, a few districts did make significant changes in their effort patterns.

The second part of the hypothesis was not sustained. There was no consistency among districts in the coefficient of elasticity of demand for education during the period of time studied.

Hypothesis 2. Local school fiscal policies concerning: (a) financial effort in proportion to ability, (b) elasticity of demand for education and (c) the local revenue receipts provided per pupil, are related to socioeconomic factors.

Hypothesis 2 (a) was not confirmed. Regression equations for each state for two periods of time (1950 and 1960) were computed and each equation appeared to explain much of the variation in effort in that state. However, the regression equation of a state for 1950 had but little resemblance to its regression equation for 1960 because in most instances the same independent variables did not appear in both equations which were developed by the step-wise multiple regression method from a list of 22 variables. Furthermore, no independent variable consistently appeared in the equations of all four states. Although no set of socioeconomic variables could be found that through time was consistently highly associated with variations in local effort, it was found that measures of per capita income were generally positively associated with variations in local effort in all four states during the different time periods studied. That is, the greater the per capita wealth of the district, the higher the local effort in proportion to ability. This is the reverse of the trend among the states because in general the states with the highest per capita income make the lowest combined state and local effort in proportion to ability.

Hypothesis 2 (b) was not confirmed. No significant relationship of socioeconomic factors to the coefficient of elasticity of demand for education was found.

Hypothesis 2 (c) was confirmed. Measures of per capita income explained more of the variance in local revenue receipts per pupil than all other socioeconomic variables studied combined. This was true in all four states studied.

Hypothesis 3. Changes in local school fiscal policy are traceable to such factors as exchanges in the power systems, changes in the leadership activities of the school superintendent, changes in socioeconomic factors, or other factors not yet identified. It was difficult to test this hypothesis because, as has been pointed out above, most districts did not make radical changes in local financial effort during the 18 year period studied. Case studies were made of seven districts which had made great increases in local effort during the period under study. It was found that many forces influenced change in these districts and the same forces causing change were not present in all districts. Following are the principal findings derived from the case studies: economic leaders were influential in bringing about change in six of the seven districts; the superintendents were influential in bringing about change in four districts; and there were significant population changes in two districts.

Hypothesis 4. The power structures in low financial effort districts are more monopolistic than the power structures in high effort districts. This hypothesis was substantiated. The evidence showed that the low effort districts tended to have noncompetitive type of power structures whereas the power structures of high effort districts tended to be of the competitive type.

Hypothesis 5. School administrators of high financial effort districts will demonstrate greater status and power in the political structure activities than the educational leaders in the low effort districts. This hypothesis was not confirmed. However, it was found that the superintendents of high effort districts were more politically active in resolving both educational and general community issues than the superintendents of low effort districts.

Hypothesis 6. The beliefs of leaders in the power structures, of registered voters and of teachers will be more liberal in the high financial effort districts. The belief scales used produced scores in three broad areas: civic beliefs (the role of government), economic beliefs and educational beliefs. Hypothesis 6 was only partly supported by the data. Community influentials, teachers and registered voters all held more liberal civic beliefs in the high effort districts than similar groups in low effort districts but there was no significant difference in educational or economic beliefs.

Hypothesis 7. Liberal or conservative fiscal policy in school districts is more closely associated with variations in the economic beliefs than variations in the educational beliefs of leaders in the power structure. The data did not support this hypothesis.

Hypothesis 8. The patterns of voter participation in political decision-making and perceptions of voter effectiveness differ in communities having competitive and noncompetitive power structures. The data substantiated this hypothesis.

The first part of this hypothesis was confirmed by the data gathered from an intensive study of the voters in two districts--one with a competitive and the other with a noncompetitive power structure. The registered voters in the competitive district were more politically active, they spent more time and money in political activities, they were more public in their activities and there were more "gladiators" and fewer "apathetics" among them than in the noncompetitive district.

The second part of this hypothesis, the voters' perceptions of their effectiveness differ in communities having competitive and noncompetitive power structures, was not substantiated by studies made in 22 districts. The research staff had classified the power structures of these districts on the basis of intensive studies and there appeared to be no difference in the voters perceptions of their effectiveness in competitive and noncompetitive districts. However the voters in most districts did not actually know the types of power structures in their districts because only 38.6 percent of the voter sample studied actually lived in districts with competitive power structures but 72.5 percent of the voters throught they lived in competitive districts. But the voters who perceived that they lived in a district with noncompetitive structure felt that they were less effective than the voters who believed that they lived in competitive districts.

Hypothesis 9. The characteristics of board members and superintendents differ in communities with competitive and noncompetitive power structures. This hypothesis was only partly confirmed. Board members in competitive districts tended to serve for shorter terms than the board members in noncompetitive districts. The tenure of superintendents was shorter in the competitive than in the noncompetitive districts. There was no significant difference in the status and power of superintendents in the two types of districts.

Hypothesis 10. Community influentials, teachers and registered voters differ in civic, economic and educational beliefs in communities with competitive and noncompetitive power structures. The data did not support this hypothesis. Very little relationship was found between civic, economic, and educational beliefs and typology of power structure. Only one statistically significant correlation was found. The value placed on education by the registered voters was slightly higher in the districts with competitive power structures.

Hypothesis 11. Community influentials differ in their characteristics in communities with competitive and noncompetitive power structures. This hypothesis was largely substantiated. The percent of all leaders who were political leaders was greater in competitive districts; the percent of all leaders who were economic leaders was greater in the noncompetitive districts; there was no difference in the average age or formal education of the leaders in the two types of districts; the percent of leaders who were born in the noncompetitive districts was significantly higher; and the average number of adult relatives living in the districts per leader was much greater in the noncompetitive districts.

Hypothesis 12. Community influentials differ in certain personal characteristics in high effort and low effort school districts. This hypothesis was largely confirmed. The power structures of the low financial effort districts were dominated more by leaders from the economic system than in high effort districts. Furthermore, a larger percentage of the leaders of high effort districts were from the political category. The community influentials in the low effort districts tended to produce closed social systems whereas the leaders of the high effort districts tended to produce open social systems. The percent of leaders who were native born was much higher in the low effort districts. More of the leaders of the low effort districts tended to be locals. The community influentials in the high effort districts participated more in the resolution of civic and educational issues than the leaders in the low effort districts. Attention is directed to the fact that the findings concerning the differences in the characteristics of community influentials in high and low effort districts are similar to the differences in the characteristics of influentials in districts with monopolistic and competitive power structures reported under Hypothesis 11.

CHAPTER 1

DESIGN OF THE STUDY

The analysis of factors associated with or causing differences in levels of local financial effort among school districts is a difficult task. The research available in this area is limited. Why do the people of some school districts allocate more of their resources for education than the people of other districts? Some authors have suggested that the public economy is the victim of "muddled-through" decisions or of decisions by default. A number of studies have shown that various socioeconomic factors affect decision-making on school fiscal policy. However, recent empirical data about community decision-making suggest that an investigation of the elements of community power structure and the leadership activities of superintendents may prove to be productive in explaining some of the differences in effort.

The research described in this report was a fundamental study through time and in depth of critical factors affecting local decision-making on school fiscal policy. It brought together in one design a method for investigating the interrelationship of socioeconomic factors, educational leadership and community power structure and the relationship of these factors to local school fiscal policy.

This research was conducted over a three and one-half year period starting in 1964. Certain school districts in the states of Florida, Georgia, Kentucky and Illinois were selected for study. The basic procedure was to identify and describe elements of the social system in which education functioned that were related to school policy. Answers were sought to the following questions: (a) Have most school districts in selected states followed relatively consistent patterns of local school fiscal policy as measured by local effort in relation to ability and elasticity of demand for education? (b) What socioeconomic factors are associated with effort in relation to ability and elasticity of demand? (c) What unusual changes in fiscal policy have occurred through time in school districts in selected states? (d) Are such factors as social power exchanges, economic changes, and changes in educational leadership activities related to changes in local school fiscal policy? (e) What relationships do the characteristics of community power structure (e.g., monopolistic, competitive, pluralistic) have with the level of local financial effort? (f) What relationships do the characteristics of educational leadership have with observed variations in effort? (g) How are certain socioeconomic beliefs among the population, power wielders, and teachers in selected school districts related to financial effort? (h) Do economic beliefs have a closer relationship than educational beliefs to liberal or conservative fiscal policies among selected school districts? (i) Is there a relationship between patterns of voter participation and typology of power structure? (j) Do the characteristics of community influentials have any relationship to typology of power structure? (k) Do the civic, economic and educational beliefs of community influentials, teachers and registered voters have a relationship to typology of power structure?

Related Research

Certain empirical findings developed in Cooperative Research Project #1324 directed by Kimbrough (42) influenced the design of Cooperative Research Project #2842. Project #1324 consisted of an analysis of power and decision-making in two school districts which had a similar index of social climate but differed more than one and one-half standard deviations in local financial effort. The objectives of the project were: (a) to describe the power structures of the two districts; (b) to describe how the top influentials in the power structures influenced educational policies; (c) to discover the operational beliefs of the influential leaders in each power structure; (d) to show relationships of consistency in operational belief patterns and the power held by individuals; (e) to compare the beliefs of leaders and the people within and between the two districts on a liberal-conservative continuum.

Project #1324 was a significant study because it was the first time that identical techniques were used to assess the power systems of two school districts having similar social climate indexes but varying widely in local financial effort to support schools. The differences in the power systems discovered in the two school districts and the leadership behavior of the two superintendents were dramatic. The findings suggested a far more extensive study of the behavioral factors in community power structure and other socioeconomic factors which are related to local school fiscal policy.

In his extensive review of ability and effort among local school districts and states in 1952, Johns (36) found that there was very little research to explain differences in effort among the districts of comparable ability. It is interesting that Johns, at that time, offered two possible hypotheses to be researched; namely, the cultural level of the people and the quality of educational leadership in the districts. Assuming that certain cultural factors had a relationship with effort, Gentry (26) researched the social climate hypothesis and found that only 30 percent of the variation could be explained by numerous cultural factors.

James, Thomas, and Dyck (34) studied the effects of state support on equalization, local initiative, and levels of expenditure; interaction of wealth and expenditures for education; and fiscal relationships in budget making. These researchers found that the patterns of state support did have some effect on local initiative in some states and that educational expenditures were significantly related to wealth.

Authorities in economics have recently become interested in the problem of financial support for education and the relationship of education to the public economy. Galbraith (25) has emphasized the influence of the classical economic theory in the development of a "starved" public economy. Many authorities in economics have studied the problem of allocating resources between the private economy and the public economy. The classical economists assumed that the market mechanism was as efficient a mechanism for allocating resources between the public economy and the private economy as it was for allocating resources within various sectors of the private economy. Data have been produced which show that these allocations are arbitrary rather than based upon any law of the market place in which supply and demand are assumed to operate. The following quotation from Eckaus (20 p. 128) illustrates this point:

> There has been a good deal of concern in the United States in recent years over the adequacy of the quantity and quality of teaching personnel even at the elementary and high school levels. Yet studies of the rate of return on the investment in teachers as a form of human capital would undoubtedly show, as the previously quoted aggregate studies have shown, that this rate is low relative to other rates of return available in the economy. Taking the market mechanism at face value, it would seem to be signaling that there are too many teachers and that the resources we have would earn a higher return if shifted elsewhere. Yet we quite rightly do not believe these signals.

The research studies of Schultz (66) and Fabricant (21) have shown that investment in education is positively related to increases in the national economy.

McLoone (46) and Hirsch (32) studied the elasticity of demand for education. Both of these researchers concluded that over a long period of time the elasticity of the demand for education approached unity but that the demand has been increasing in recent years.

Political research based upon the concept of mass participation through elements of a pluralistic society has proved even more futile than the market mechanism in explaining the deprived public economy. As a result, numerous empirically oriented scholars in political science and sociology have abandoned the concept of a mass society. A growing body of empirical data about community power structure suggests that many of the decisions to allocate resources in many communities are effectively controlled by a, relatively speaking, small number of power holders. These studies suggest that the reason previous studies have not successfully explained the basis of resource allocation for education is due to the assumption of a massive participation concept of decision-making. Furthermore, as Cunningham (14) suggested, investigators researching the problem must not assume that educational decision-making exists in a vacuum apart from decisions made in the private economy.

The political analysis aspects of Cooperative Research Project #2842 were based upon the contemporary approaches to the study of politics usually associated with the period following Floyd Hunter's publication of Community Power Structure (33), the Cheathem County Studies, and the Valley City Studies that were conducted during the early 1950's.[1] Hunter's study had a great impact upon the study of political behavior. His empirical postulation of a monopolistic informal power structure was a thrust upon a field of study which had somehow become complacent in the impressionistic, pluralist orientation. Was the direction of social policies really controlled by a few men of great social power as Hunter found in Regional City?

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[1] The Cheatham County Studies were conducted during 1952-54 by the Central Staff Southern States Cooperative Program in Educational Administration. The Valley City Studies were during the same period at the University of Oregon Community Study Project.

Hunter's publication was followed by a number of major studies in most regions of the United States by such authorities as Pellegrin and Coates (55), Agger (2), D'Antonio and Associates (19), Schulze (68), Miller (49), Webb (71), Goldhammer (27), and Belknap (11). Most of these writers used the reputational technique employed by Hunter. Other studies by such authorities as Dahl (16), Banfield (8), and Freeman (24), used the decision analysis technique recommended by Dahl in his noted study of New Haven.

The discrepancy in findings reported by different researchers resulted in an intensive debate over the method for study. Dahl (15), Polsby (57), Wolfinger (74), and Kaufman (39) have been vocal critics of the reputational technique. The decision approach has also come under some strong criticism by such writers as Price (60), Anton (4), and Janowitz (35). D'Antonio (18), Agger (2), Gourley (28), Schulze and Blumberg (68), and others have presented data which tend to support the reputational approach. Some writings exemplified by Rossi (64) and Fisher (22) attempted to examine the strengths and weaknesses of both the contemporary and past approaches to the study of power.

This rather intensive controversy over method appears to have about run its course, since the major protagonists in the controversy have been overly influenced by different assumptions in the development of techniques as Anton (4) has suggested. Furthermore, studies by Wellman (72), Gourley (28), and Wilson (73), which used elements of both techniques failed to show the great discrepancy between reputation and actual participation in civic issues often attributed by critics to the reputational technique.

Presthus (59) made a study in two New York cities in which he made a comparison of both techniques. In a preliminary analysis of his data, Presthus reported that the reputational technique tended to identify those men of power who remained behind-the-scenes, whereas the decision technique tended to identify more of the overt "leg men" in the process of decision-making. There was considerable overlap in the leadership lists produced by both techniques. Presthus concluded that a person would be ill-advised not to use elements of both techniques. The researchers for USOE Project #1324 (42) combined the elements of both techniques in an adaptation of the power attribution technique and found that the power structures in the two districts studied had different characteristics. Form and Miller (23) also found that power structures differed in different communities. They proposed several typologies of community power structure. Kammerer and Associates (38) found variations of monopolistic and competitive power structures in selected Florida cities. Kimbrough (41) developed the concept of a continuum of power in which variations of monopolistic, competitive, and pluralistic power structures may be located.

The controversy over whether power structure is monopolistic or competitive in all American communities is rather unproductive and has served to becloud some components essential to policy making. It is now evident that both types exist. Actually the form of power structure is only one of the components of a total power system which influences the allocation of funds for education and many other community decisions.

In his review of research findings concerning the multiple variables influencing administrative behavior, Campbell (13) pointed to the need to research community value patterns, power structure variables, and the effect of both covert and overt behavior upon administrative behavior.

Concerning control over educational behavior, he concluded that "Community control is exercised by a handful of influential people who seem, for the most part to be willingly accorded their positions of influence by their positions of influence by their fellow citizens." (13, p. 244).

The relationship between certain economic assumptions and the level of financial support of the public economy has been emphasized by Galbraith (25), Johns and Morphet (37), and others. Studies like those conducted by Kimbrough (40) and Levine (43) have demonstrated that this relationship is more real than imaginary. Levine found that the economic conservative was conservative in matters regarding expenditures of public funds. Kimbrough found that power wielders who held individualistic patterns of operational beliefs (conservative economic theory) were conservative toward the financial support of public programs.

More attention is being given to political ideology as an important component of a system of power. The studies by Meredith (47), McClosky (44), Levine (43), and Hines (31) show that it is now possible to measure those political ideologies that may influence the level of effort among school districts. Among the above studies, Meredith's study is the only one which treats political ideology as an important component of a community power system rather than as a component of mass society.

A review of the literature reveals only a cursory treatment of the way in which the school leaders of a school district use, work with, or involve the top power wielders in community power systems in promoting educational improvement projects. The National Society for the Study of Education in its 1954 Yearbook (54) presented an extensive study of the work of citizens' committees for the public schools. It was pointed out that many of the committees had effected decision-making on the public schools and many had been ineffective. The relationship of these citizens' committees to community power structures was not examined.

Bailey, Frost, March and Wood (7), in their review of professional political activities in eight northeastern states, found that "disorder and naivete are the schoolmen's outstanding political characteristic." In the previous studies conducted by the principal investigators of this project, the administrator's understanding of power politics has ranged from naivete in several instances to a few instances in which the superintendent was himself an important policy leader in the power structure.

Studies like those by Miller (51) and Hanson (30) demonstrated that knowledge of community power structure was very useful in predicting the successful passage of projects which stimulate much interest in a community. Such prediction studies have served to validate the importance of concepts of community power structure for educational leaders.

In summary, such studies as those referred to above have ushered in a completely different concept of the decision-making process from that which prevailed prior to the 1950's. These empirical findings demand a new approach to behavioral research in the politics of educational decision-making.

Hypotheses Tested

Following is a summary of the principal hypotheses tested in this project:

1. Most of the districts selected for study have followed relatively consistent patterns of financial effort and elasticity of demand for education over a period of years.
2. Local school fiscal policies concerning: (a) financial effort in proportion to ability, (b) elasticity of demand for education and (c) the local revenue receipts provided per pupil, are related to socioeconomic factors.

3. Changes in local school fiscal policy are traceable to such factors as exchanges in the power systems, changes in the leadership activities of the school superintendent, changes in socioeconomic factors or other factors not yet identified.
4. The power structures in low financial effort school districts are more monopolistic than the power structures of high effort districts.
5. School administrators of high financial effort districts will demonstrate greater status and power in the political power structure activities than the educational leaders in the low effort districts.
6. The beliefs of leaders in the power structures, of registered voters, and of teachers will be more liberal in the high financial effort districts.
7. Liberal or conservative fiscal policy in school districts is more closely associated with variations in the economic beliefs than variations in the educational beliefs of leaders in the power structure.
8. The patterns of voter participation in political decision-making and perceptions of voter effectiveness differ in communities having competitive and non-competitive power structures.
9. The selection of board members and superintendents differ in communities with competitive and non-competitive power structures.
10. Community influentials, teachers and registered voters differ in civic, economic and educational beliefs in communities with competitive and non-competitive power structures.

11. Community influentials differ in their characteristics in communities with competitive and non-competitive power structures.
12. Community influentials differ in certain personal characteristics in high effort and low effort school districts.

Procedures

The analysis of factors associated with or causing differences in levels of local financial effort among school districts is a difficult task. The research available in this area is limited. Why do the people of some school districts allocate more of their resources for education than the people of other districts? Some authors have suggested that the public economy is the victim of "muddled-through" decisions or of decisions by default. A number of studies have shown that various socioeconomic factors affect decision-making on school fiscal policy. However, recent empirical data about community decision-making suggest that an investigation of the elements of community power structure and the leadership activities of superintendents may prove to be productive in explaining some of the differences in effort. The basic assumption back of the research design in this project was that educators are not dealing with a closed society on school decision-making. In other words, it was assumed that although socioeconomic factors do affect decision-making, that these factors do not inevitably determine fiscal policy in all school districts. Although Cooperative Research Project #2842 started with this assumption, it was also examined in the project.

Following is a summary of the procedures used set forth in steps:

Step 1. The patterns of fiscal policy during a 17-year period (1945-46 to 1962-63) in all school districts of 20,000 population or more in 1960 in the states of Florida, Georgia, Kentucky, and Illinois were determined. The patterns of fiscal policy were described in terms of two measures as follows: local financial effort in relation to financial ability and elasticity of demand for education. The relationship of certain socioeconomic factors such as per capita income, educational level of the adult population, size of district, rate of population growth and similar factors to patterns of fiscal policy were analyzed. This background analysis through time was used to identify districts that had made substantial changes in school fiscal policy during the 17-year period and to identify districts which at the end of the period were making the highest financial effort in relation to ability and those making the lowest effort.

The decision to study fiscal policy for a 17-year period was made because the year 1945 was the earliest year for which comparable data on net effective buying income (disposable income) was available.

The decision was made to include only districts with a population of 20,000 or more in this study in order to exclude districts that were predominantly rural in character. This was done because of the availability of more reliable comparable data. Furthermore, urban and rural districts represent two different parameters in many socioeconomic measures.

Careful consideration was given to the possibility of selecting states from different regions of the United States for study in order that findings could be generalized for the nation. However, different states and different regions have different patterns of behavior with respect to decisions on school fiscal policy. James, Thomas, and Dyck (34, p. 99) after a careful study of wealth and expenditures in selected districts in a number of states in different regions of the United States concluded the following: "The pattern of relationship between expenditures and our measures of wealth and aspiration seems to vary significantly from state to state, not only in the level of expenditures but also in the strength of the effects of the different explanatory variables." Therefore, it is doubtful that any sample of states selected for the purpose of studying the effects of socioeconomic factors, elements of power structure, and leadership behavior on decision-making with respect to local school fiscal policy would produce valid evidence from which generalizations with national application could be developed. However, it is possible that regional patterns of fiscal policy do exist. In order to draw valid conclusions for the nation, it would be necessary to conduct a number of studies of several states in each region of the United States and to compare the findings of these different studies.

For the reasons stated above, the decision was made to select three representative states from the southeastern states and one state from the mid-west for intensive study. The states of Florida, Georgia and Kentucky were selected from the southeastern region and Illinois from the mid-west.

Florida was selected because it is a rapidly growing state with an exclusive county unit school system. Florida is the wealthiest southeastern state and has an emerging two-party political system.

Georgia was selected because it is representative of the old South. It has a mixed county unit-independent city school system organization. Georgia is average in wealth in the southeastern region and it has a one-party political system.

Kentucky was selected because it is a border state. It has a mixed county unit-independent city school system. It is below average in wealth in the southeastern region and it has a two-party political system.

Illinois was selected as an appropriate state from the mid-west because it has the district school system type of organization. It is above the national average in per capita personal income, and it has a two-party political system.

It was not assumed that findings from these four states could be generalized for the nation.

Step 2. The second step was to identify the factors and events associated with changes in fiscal policy for those districts that had experienced dramatic changes in fiscal policy during the past 17 years.

Step 3. The third step was to make an intensive analysis of the 12 districts in these four states making the greatest financial effort in relation to financial ability and the twelve districts making the lowest financial effort. The three highest effort and the three lowest effort districts in each of the four states were selected for intensive analysis. The procedures used to make these detailed analyses are described in the several chapters of this report.

Overall Design of the Study

The overall design of the study was based on the assumption that the school system is a social system comprised of subsystems in interaction with many social systems in the environment of the school system. It was also assumed that numerous socioeconomic factors, beliefs, values and events affect these interactions which in turn affect community decision-making on education. Thus we conceptualized the school system as only one of the many social systems comprising an extremely complex total social system. The analysis of these interrelationships is an extremely complex and difficult process. The outputs of one social system or its components are the inputs of other social systems and their components. The behavior of any social system and its components is no doubt largely determined by these complex interactions processed by each social system and its components through a filter comprised of goals, purposes, beliefs, values, previous experience, etc. This study only scratches the surface of the problem of analyzing the factors affecting the decision-making in local school systems.

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CHAPTER 2

THE RELATIONSHIP OF SELECTED SOCIOECONOMIC FACTORS TO LOCAL SCHOOL FISCAL POLICY - FOUR STATES ANALYZED SEPARATELY

The local school system can be conceptualized as a social system in interaction with its environment. The school system receives an input from its environment in the form of local financial support and it produces an output in the form of people whose education has been conditioned to a considerable extent by the financial input. It has been known for many years that school systems even within the same state vary widely in the decisions they make on local school fiscal policy. Some school systems within a state make a high local financial effort in relation to local taxpaying ability; others make a low effort. Why that variance? Is it caused by socioeconomic factors beyond the control of local school officials or is it caused at least in part by factors that can be controlled? If local school fiscal policy is largely determined by socioeconomic factors in the school system's environment which cannot be changed or can be changed only gradually, then leadership can play only a minor role in affecting local school fiscal policy. On the other hand, if socioeconomic factors do not largely determine local financial effort to support schools, then local school systems are open to change in their fiscal policies.

Chapters 2 and 3 of this study deal exclusively with the relationship of socioeconomic factors to local school fiscal policy in four states--Florida, Georgia, Kentucky and Illinois. In Chapter 2, each state is analyzed separately and in Chapter 3 the data for all four states are combined and treated as one sample.

The hypotheses listed in Chapter 1 that are examined in this chapter and in Chapter 3 are as follows:

1. Most of the districts selected for study have followed relatively consistent patterns of financial effort and elasticity of demand over a period of years.
2. Local school fiscal policies concerning: (a) financial effort in proportion to ability, (b) elasticity of demand for education and (c) the local revenue receipts provided per pupil are related to socioeconomic factors.

Procedures

A brief description of the principal procedures used in testing the hypotheses listed above is presented in this section.

Socioeconomic Variables - Independent Variables

The project staff considered many socioeconomic factors before selecting those used in the study. The criteria used for selecting these factors were as follows: (1) The factors had been used by other researchers in related studies; (2) It could be rationally hypothesized that there might be some relationship between the factor selected and local fiscal policy; and, (3) The data were available. It was also desired to include a sufficient number of socioeconomic factors to measure the significant characteristics of the socioeconomic environment of the school and at the same time avoid causing unnecessary labor by including variables that would add little to the validity of the study. After applying these criteria, the staff selected the following socioeconomic variables. These variables are considered as independent variables throughout this study and the symbol X with its appropriate subscript designates the variable indicated below wherever used in this project report.

X_1 = average daily attendance

X_2 = per capita net effective buying income

X_3 = average daily attendance as a percent of total population

X_4 = federal revenue receipts per ADA

X_5 = state revenue receipts per ADA

X_6 = percent civilian labor force unemployed

X_7 = percent of families with income of $10,000 or more

X_8 = percent of population that is non-white

X_9 = population per square mile

X_{10} = percent rural non-farm

X_{11} = percent rural farm

X_{12} = percent of 14-17 year olds in public or private schools

X_{13} = persons 25 years old and over--median school years completed

X_{14} = females 14 years and older, percent in labor force

X_{15} = employed persons, percent engaged in manufacturing

X_{16} = percent 25 years old or older, with four or more years of college

X_{17} = median income of families

X_{18} = married couples, percent without own household

X_{19} = percent 65 years old and over in total population

X_{20} = percent in ADA public schools 1-12 to total population age 7-17

X_{21} = population size

X_{22} = percent of population increase over ten-year period

Measures of Fiscal Policy - Dependent Variables

Six measures of local school fiscal policy were applied to all four states. Three of these dependent variables were measures of local financial effort in relation to taxpaying ability. They were computed by dividing the local revenue receipts of the local district at a given time by the net effective buying income of that district as reported by the periodical Sales Management, except for the year 1963 where the divisor was the equalized value of property. The staff did not find it possible to obtain equalized valuation for all districts in each state except for the year 1963.

Two measures of income elasticity of demand for education were used, one for the period 1946-55 and the other for the period 1954-63.

The measures of local fiscal policy were coded E for measures of effort, D for measures of elasticity of demand and R for a measure of revenue per pupil. Subscripts for these symbols indicate the measures were computed for different periods of time. Following is a list of the measures of local fiscal policy used as dependent variables.

E_2 = effort of each district for the latest year of the study - 1963

E_5 = average effort of each district for the years 1949-50, 1950-51 and 1951-52

E_7 = average effort of each district for the years 1959-60, 1960-61 and 1961-62

D_3 = elasticity of demand of each district for the period 1946-55

D_5 = elasticity of demand of each district for the period 1954-63

R_4 = total local revenue receipts per pupil in ADA for each district in 1960

It will be noted that the symbols for the dependent variables of the same type do not bear consecutive subscripts. This is due to the fact that the project staff experimented with other measures of local school fiscal policy but did not find them useful and so they were dropped from the study. The original coding of the variables used was retained. The formulas for the different dependent variables are set forth in the following paragraphs.

Formula for E_2 - Measure of Effort for 1963. Let R_1 equal local revenue receipts for 1963 and W_2 equal the equalized valuation. Then

$$E_2 = \frac{R_1}{W_2}$$

Formula for E_5 - Average Effort for 1949, 1950, 1951. Let R_1 equal the local revenue receipts for the year indicated and W_1 the net effective buying income for the year indicated. Then

$$E_5 = \frac{R_1\ (1949\text{-}50) + R_1\ (1950\text{-}51) + R_1\ (1951\text{-}52)}{W_1\ (1949) + W_1\ (1950) + W_1\ (1951)}$$

Formula for E_7 - Average Effort for 1959, 1960, 1961. Using the same symbols as above the formula becomes

$$E_7 = \frac{R_1\ (1959\text{-}60) + R_1\ (1960\text{-}61) + R_1\ (1961\text{-}62)}{W_1\ (1959) + W_1\ (1960) + W_1\ (1961)}$$

Formula for D_3 - Elasticity of Demand for the Period 1946-1955. The income elasticity of demand for education can be roughly defined as the ratio of the change in the revenue receipts per pupil to the change in per capita income. A coefficient of 1 means that a 1 percent change in per capita income is accompanied by a 1 percent change in revenue receipts per pupil. When the coefficient is more than 1, the demand is said to be elastic and when less than 1, inelastic. In order to be useful, the coefficient of elasticity of demand must be calculated over a period of time by means of a formula more sophisticated than the above definition suggests.

Following are the symbols used for the general formula used for computing elasticity of demand:

D = elasticity of demand

byx = coefficient for predicting a dependent variable from an independent variable

X = independent variable

Y = dependent variable

Then $D = byx \dfrac{\bar{X}}{\bar{Y}}$

$$\text{and} \quad byx = \frac{\Sigma XY - \dfrac{(\Sigma X) \quad (\Sigma Y)}{N}}{\Sigma X^2 \quad - \quad \dfrac{(\Sigma X)^2}{N}}$$

In order to compute D_3, for the symbol X use the per capita net effective effective buying income of each district for each year for the period 1946-1955 and for the symbol Y use the total revenue receipts per pupil in ADA for each district for each year from 1946-1955.

Formula for D_5 - Elasticity of demand for the Period 1954-63. Follow the same procedures as those used for computing D_3 except that X and Y are for the years 1954-63.

Statistical Procedures

The most important statistical procedure used in testing the hypotheses examined in Chapters 2 and 3 is the step-wise multiple regression technique. In this program the first step involved selecting the independent variable which has the highest simple correlation with the dependent variable. In the second and in each subsequent step, the independent variable selected for inclusion was the remaining independent variable having the highest partial correlation with the dependent variable. Thus, in each step, the variable being brought into the computation was the one which made the greatest reduction in error in the analysis of variance, based upon the sum of squares of deviation. The variable selected in this manner was also the one which had the highest F ratio when brought into the regression equation. In fact, the value of the F ratio was used as the criteria for bringing in additional variables. In the present study, an F value of .001 was used as the cutoff point. Variables which, if brought into the computation, would have an F value lower than this, were omitted from the correlation equation.

The program also provided for the rejection of any variable which, after being accepted, experienced a drop in its F ratio down to some preselected level due to the effects of later variables being added. In this study the rejection level was established at .00001. This was found to be sufficiently low so that no variable, once having been accepted, was ever rejected.

The t-test was also used to eliminate from the regression equation any independent variable, which when added to the equation, had a coefficient with a level of significance of less than .05. In other words, in the step-wise program used, the equation selected as the most useful was the equation produced in the step immediately before the step when the last independent variable added had a coefficient with a level of significance of less than .05.

Summary of Findings

The findings reported in this chapter are all abstracted from the four following unpublished doctoral dissertations produced by members of the project staff in 1965.

(1) Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Florida by Harold Hansel Hopper.

(2) Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Georgia by Charles Robert King.

(3) Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Illinois by Walter Joseph Quick.

(4) Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Kentucky by Perry Ronald Adams.

All of the authors of these dissertations were members of the project staff. The identical design was used in each of these studies for all comparable data. These dissertations contain all of the raw data collected and the detail of all correlation and regression studies. They are on micro-film and can be obtained from the University of Michigan micro-film service.

Consistency of Patterns of Fiscal Policy

The consistency of the patterns of fiscal policy of local school districts was studied for the years 1945-1963. Fiscal policy as measured by local financial effort in relation to ability and as measured by elasticity of demand for education were both examined.

Consistency of Financial Effort in Relation to Ability. The financial effort of all districts with 20,000 population and more in the four states was computed for each year from 1945 to 1963. Financial effort of each district was computed for each year by dividing the total local revenue receipts for schools by net effective buying income. This measure was coded E_1, for each year.

To obtain an answer to the question of whether or not school districts in the four selected states have followed relatively consistent patterns of local school policy as measured by local financial effort, the following procedure was followed:

1. The fiscal pattern of each district was determined with respect to the median of the group studied in accordance with the following procedure.

(a) If the local financial effort of a school district remained in the same position relative to the median of the districts studied for all or almost all of the period under consideration, this school district was classified as having a relatively consistent pattern of school fiscal policy.

(b) If the local financial effort of a school district changed its position relative to the median for at least four years of the total time period, this school district was classified as having made a change in school fiscal policy.

As is shown in Table 2-1, school districts which were above, near, or below the median in the early years of the period (1945-1963) tended to stay there throughout. Eighty-eight of the 122 school districts demonstrated relatively consistent patterns. The school districts in Illinois maintained the most consistent levels of local financial effort. Florida was second, followed by Georgia and Kentucky in that order.

Table 2-1

Level of School District Local Financial Effort (E_1)
Compared to the Group Median Effort in Four
States (1945-1963)

State	Total Studied	Number of Districts with Consistent Levels			Total	Number of Districts Which had Changed Levels of E_1 Relative to Median
		Above Median	Near Median	Below Median		
Florida	32	12	3	11	26	6
Georgia	33	11	3	8	22	11
Kentucky	29	5	5	5	15	14
Illinois	28	12	3	10	25	3
Totals	122				88	34

It appears from Table 2-1 that most school districts seem to have selected an orbital path with respect to effort which they consistently followed over a period of years. As pointed out below, the state median effort of districts may change over a period of a decade but each state tends to maintain its relative position in the "peck order". That is high effort districts tend to remain high effort, low effort districts tend to remain low effort and districts near the state median tend to maintain that position. Is it possible that the people of each district tend to develop a norm which expresses the level of aspiration for education of that district? Despite the fact that most districts in the four states studied tended to follow consistent effort patterns, a number of districts did make sudden and significant changes in their fiscal policies. A number of such districts were selected for special study in order to identify the factors bringing about change in local fiscal policy. Those studies are reported in Chapter 3.

The average effort of each district for the three year period 1949-1951 (E_5) and the three year period 1959-1961 (E_7) was also computed. Table 2-2 shows that each state increased its median local effort during

Table 2-2

Median State Effort For
1949-51 (E_5) and 1959-61 (E_7)

State	Median for 1949-51 (E_5)	Median for 1959-61 (E_7)	Increase between 1949-51 and 1959-60
Florida	1.403%	1.562%	.159%
Georgia	.737	.926	.189
Illinois	1.970	3.530	1.560
Kentucky	1.250	1.430	.180

the decade under study but that Illinois increased its effort far more than the other three states. Florida, Georgia and Kentucky have traditionally provided more school revenue from state sources than from local sources whereas Illinois has traditionally provided most of its revenue from local sources. For example in 1962-63, Illinois provided 19.8 percent of its school revenue from state sources, Florida 53.0 percent, Kentucky 58.2 percent and Georgia 66.4 percent. Therefore it is not surprising that Illinois made a much greater increase in local effort during the 1950-60 decade. The states of Florida, Georgia and Kentucky followed the Southern pattern of providing most school revenue from state sources and Illinois followed the mid-western pattern of providing most school revenue from local sources. That was one of the reasons why Illinois was included in the study. It was considered desirable to contrast the effect of socioeconomic factors on local school fiscal policies in a state providing most of its school revenue from local sources with the effect of those factors on local school fiscal policies in states providing most school revenue from state sources.

It is interesting to note from Table 2-2 that although all four states increased local effort during the decade that each state maintained its relative position. That is, Illinois districts made the highest local effort, Florida second, Kentucky third and Georgia last at the beginning of the decade and at its end.

Rank order correlations between E_5 and E_7 were computed for each state. The rank order correlation for Florida was .72, Illinois .71, Kentucky .39 and Georgia .35. This indicates that there was far more shifting in the effort ranking of districts in Kentucky and Georgia than in Illinois and Florida. While these correlations do not show for the 1950-60 decade as great a consistency in local patterns of financial effort as those shown in Table 2-1 for the 1945-63 period, nevertheless they do indicate relative consistency of fiscal pattern especially in Florida and Illinois.

Consistency of Elasticity of Local Demand for Education. Regardless of the level of affluence of a society each economic good is scarce. With regard to the support of education, the question is: What happens to the demand for education, as a particular economic good, when per capita income in a school district increases or decreases? Specifically, how responsive to fluctuations in per capita income is the demand (as shown by the price the district is willing to pay) for the economic good known as education?

The responsiveness of school districts in making changes in educational expenditure, as personal income changes, has been called elasticity of demand for education. More specifically, the question becomes: What percent of change in total local school revenue receipts per pupil in average daily attendance is associated with a 1 percent change in the per capita net effective buying income of persons in a school district?[1] We are particularly concerned at this point in the consistency in the elasticity of demand for education in the 122 districts in the four states being studied. The attempt was first made to compute the year by year elasticity of demand of each district for the eighteen year period.

In making this year-by-year analysis of fiscal policy, as reflected in elasticity of demand, the staff followed the directions given by

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[1] Harold Hansel Hopper, Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Florida, Doctoral Dissertation, (Gainesville, Florida, College of Education, University of Florida, 1965).

Blank[2] and the National Bureau of Economic Research[3]. It is suggested in these sources that the coefficient of elasticity may be obtained by the following formula:

$$\frac{\Delta X/Y}{\Delta Y/Y}$$

where ΔX is the change in total local school revenue receipts per pupil in average daily attendance from one year to the next; X is the value of total local school revenue receipts per pupil in ADA for the prior year. ΔY is the change in per capita income from one year to the next, and Y is the value of per capita net effective buying income for the prior year.

It was soon found, however, that the coefficient gave unreasonable or uninterpretable results when there were decreases in the denominator.

For this reason the decision was made to test the consistency of the elasticity of demand by computing the coefficient of elasticity of each district for the period 1945-54 (coded D_3) and for the period 1953-62 (coded D_5).

Table 2-3 shows the median coefficient of elasticity of the districts above 20,000 population in each of the four states studied. It will be observed that the median coefficient of elasticity of Florida and Georgia increased considerably between 1945-1954 and 1953-1962, that the coefficient for Illinois remained practically the same and the coefficient for Kentucky declined substantially. Therefore the four states differed considerably in elasticity of demand trends. Column 3 of Table 3 shows the rank order correlation of the period D_3 with D_5. It will be noted that these correlations are either very low or near zero. In Georgia there was a slight negative correlation and in Kentucky a slight positive correlation.

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[2] Blank, David M., "The Role of the Real Property Tax in Municipal Finance," National Tax Journal 7:319-326, December, 1954.

[3] National Bureau of Economic Research, Public Finances: Needs, Sources, and Utilization - A Conference of the Universities. National Bureau Committee for Economic Research, (Princeton, N. J.: Princeton University Press, 1960).

Table 2-3

Median Coefficient of Elasticity of Four States
For the Period 1945-54 (D_3) and From 1953-62 (D_5)

State	Median Coefficient of Elasticity 1945-1954 (D_3) Column 1	Median Coefficient of Elasticity 1953-62 (D_5) Column 2	Rank Order Correlation D_3 with D_5 Column 3
Florida	.5921	1.2384	- .12
Georgia	.6589	1.6609	- .30
Illinois	1.0452	1.0312	.04
Kentucky	.7032	.4856	.26

A different method is used in Table 2-4 for examining the consistency of elasticity of demand for education. This table shows but little consistency of districts in the elasticity of demand for education. In Georgia for example only 5 districts that were above the state median elasticity in 1945-54 were also above the median in 1953-62 and only 5 that were below the median for both periods making a total of 10 districts that maintained their position either above or below the median for both periods. But a total of 23 districts changed their positions from above to below the median or from below to above. In fact in only one state, Kentucky, did more districts maintain their same position with reference to the median than changed position. Therefore the elasticity of demand for education of the districts studied in these four states is not very consistent through time. Despite this fact however there were some districts in each of these states that consistently had a coefficient of elasticity either above or below the state median for the two time periods studied.

Table 2-4

Position With Reference to the Median
Coefficient of Elasticity 1953-62 as Compared With 1945-54*

State	Number of Districts Above 20,000 in Population Col. 1	Number of Districts Above the 1945-54 Median Which Were Also Above the 1953-62 Median Col. 2	Number of Districts Below the 1945-54 Median Which Were Also Below the 1953-62 Median Col. 3	Number of Districts Below the 1945-54 Median and Above the 1953-1962 Median Col. 4	Number of Districts Above the 1945-54 Median and Below the 1953-1962 Median Col. 5
Florida	32	6	7	10	9
Georgia	33	5	5	12	11
Illinois	28	5	5	9	9
Kentucky	29	8	9	6	6

*Districts at or very near the median in either 1945-54 or 1953-62 were listed in either Col. 4 or Col. 5 depending upon the direction of change.

Relationship of Selected Socioeconomic Factors To Local Financial Effort

Three measures of local financial effort (E_5, E_7 and E_2) and 22 socioeconomic variables (X_1 to X_{22}) were used for this analysis. They are described in the first part of this chapter. The step-wise multiple regression technique, also described in the first part of this chapter, was used for this analysis. The relationship of the socioeconomic variables to E_5, E_7 and E_2 for each of the four states is presented in the following paragraphs.

Relationship of Socioeconomic Variables to E_5. The zero order correlations between E_5 and the 22 socioeconomic variables are presented in Table 2-5. Five of these variables were not available for Illinois districts. Of the 17 variables available for all districts in the four states only one correlation between E_5 and an independent variable had the same sign for all four states. That variable was X_1, average daily attendance. Even that correlation was very low ranging from .023 in Florida to .243 in Georgia.

The correlations listed in Table 2-5 present strange contrasts. For example the correlation of X_2 (per capita net effective buying income) with X_5 in the state of Illinois was .755 but in Kentucky it was -.473. This would indicate that in Illinois the more wealthy districts made a higher local financial effort to support school than the less wealthy districts during the years 1945-1951 but that the reverse was true in Kentucky. The variable X_3 (average daily attendance as a percent of the total population) had a correlation of .860 with E_5 in Illinois and .489 in Kentucky but had negative correlations of -.098 and -.103 in Florida and Georgia respectively.

There is not even a consistent pattern of relationship in the southern states. Only four variables, X_1, X_2, X_9, and X_{20} have the same correlation sign in the states of Florida, Georgia and Kentucky. Therefore it is concluded that no consistent pattern of relationship between socioeconomic variables and local financial effort is revealed in Table 2-5.

Table 2-6 shows the regression equations of the four states for the dependent variable and Table 2-7 the coefficients of separate determination for the significant independent variables. The dependent variable E_5 is a measure of the average financial effort in relation to ability of the districts for the period 1949 to 1951 and the data for the socioeconomic variables were for the year 1950.

Table 2-5

Zero Order Correlations Between Socioeconomic Variables and E_5

Socioeconomic Variable	Florida	Georgia	Illinois	Kentucky
X_1	.023	.243	.232	.083
X_2	-.066	-.103	.755	-.473
X_3	-.098	-.121	.860	.489
X_4	-.105	.164	NA*	.067
X_5	-.072	-.106	.414	.117
X_6	.308	.025	.126	-.239
X_7	.410	.053	-.545	-.208
X_8	-.288	.004	-.042	-.217
X_9	-.120	-.031	NA	-.400
X_{10}	-.109	.166	NA	.397
X_{11}	-.375	-.244	NA	.597
X_{12}	.174	-.128	-.373	-.190
X_{13}	.299	.059	-.424	-.370
X_{14}	-.027	.337	-.536	-.405
X_{15}	-.146	.120	-.175	-.233
X_{16}	.213	-.061	-.352	-.238
X_{17}	.306	.361	.170	-.194
X_{18}	-.071	.148	-.326	-.055
X_{19}	.227	-.399	.136	-.145
X_{20}	.342	.075	NA	.339
X_{21}	.052	.234	-.236	-.049
X_{22}	.261	.310	.053	-.086

*Data not available

Table 2-6

Regression Equations for E_5 and Socioeconomic Variables
(E_5 for the Years 1949-51 and Socioeconomic Variables for 1950)

Socioeconomic Variable	Florida	Georgia	Illinois	Kentucky
X_2 (Per capita net effective buying income)	-.00140		-00070	
X_3 (Average daily attendance as a percent of the total population)			.08202	
X_5 (State revenue receipts per pupil in ADA)				-.01968
X_7 (Percent of families with income of $10,000 or more)	.26160			
X_{11} (Percent rural farm)	-.02097			.02898
X_{17} (Median income of families)				.00034
X_{19} (Percent 65 years old and over in total population)		-.09197		
X_{20} (Percent in ADA in public schools of total population age 6-19)	.01941			
Constant Term	1.00448	1.37852	1.96185	1.16017
Multiple R	.779	-.399*	.882	.777

*Zero order correlation of the dependent variable with the one independent variable in the regression equation.

Table 2-7

Four State Comparison of Significant 1950 Socio-Economic Variables As They Predict E_5

(Average local financial effort for 1950, based on Net Effective Buying Income)

Variable	Coefficients of Separate Determination*			
	Florida	Georgia	Kentucky	Illinois
X_2 (Per capita net effective buying income)	.06 (N)			.21 (N)
X_3 (Average daily attendance as a percent of total population)				.57 (P)
X_5 (State revenue receipts per pupil in ADA)			-.06 (P)	
X_7 (Percent of families with income of $10,000 or more)	.25 (P)			
X_{11} (Percent rural farm)	.19 (N)		.76 (P)	
X_{17} (Median income of families)			-.09 (N)	
X_{19} (Percent 65 years old and over in total population)		.16 (N)		
X_{20} (Percent in ADA public schools to total school-age population)	.11 (P)			
Totals**	.61	.16	.61	.78

*The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with E_5.

**The sum of the coefficients of separate determination is equal to the Multiple R^2.

These tables contain some rather erratic findings. Although the multiple correlations of three states, Florida, Illinois and Kentucky are fairly high, only two variables X_2 and X_{11} are found in the regression equations of as many as two states. Therefore there is no combination of socioeconomic variables common to these four states that can explain much of the variation in effort of school districts in the period 1949-51.

Table 2-7 shows the coefficient of separate determination of each of the variables in the regression equations. It was computed by multiplying the Beta coefficient by the simple correlation between the independent variable and dependent variable. The Beta coefficient was computed by multiplying the regression coefficient by the ratio of the standard deviation of the dependent variable. The coefficient of separate determination shows what part of the total variation in the dependent variable is associated with each independent variable included in the regression equation. For example in Table 2-7, variables X_2 and X_3 are included in the regression equation for Illinois. A total of .78 or 78 percent of the variation in E_5 is associated with independent variables X_2 and X_3. This is Multiple R^2. Variable X_2 contributed 21 percent and X_3 contributed 57 percent making a total of 78 percent. Table 2-7 shows that even when the same independent variable appears in the regression equation of two different states, the amount of contribution to the variation in the dependent variable varies widely. For example X_2 appears in the regression equations of both Florida and Illinois but it contributed 6 percent to the variation of E_5 in Florida and 21 percent in Illinois. Furthermore X_{11} contributed 19 percent to the variation of X_5 in Florida and 76 percent in Kentucky.

Relationship of Socioeconomic Variables to E_7. Table 2-8 shows the zero order correlations between E_7 (average local financial effort for the years 1959-1961) and socioeconomic variables for the year 1960. This table shows some of the same phenomena as were revealed in Table 2-5.

Table 2-8

Zero Order Correlations Between Socioeconomic Variables and E_7

Socioeconomic Variable	Florida	Georgia	Illinois	Kentucky
X_1	.112	.578	-.438	.391
X_2	.325	.506	-.400	.260
X_3	-.274	-.403	.777	.087
X_4	-.457	-.146	NA*	.017
X_5	-.387	-.603	.263	-.430
X_6	-.039	.067	-.129	-.261
X_7	.064	.422	-.096	.581
X_8	-.110	.113	-.248	.082
X_9	.029	.326	NA	.154
X_{10}	-.260	-.389	NA	-.413
X_{11}	-.327	-.412	NA	-.192
X_{12}	.105	.124	-.287	.611
X_{13}	.029	.336	-.526	.436
X_{14}	-.034	.429	-.331	.402
X_{15}	-.237	-.129	.268	.489
X_{16}	.235	.480	-.327	.407
X_{17}	-.022	.277	.096	.577
X_{18}	-.083	.056	.017	-.278
X_{19}	.561	-.011	-.139	.275
X_{20}	.484	.010	NA	.120
X_{21}	.143	.584	-.441	.239
X_{22}	.299	.068	.265	.260

*Data not available.

Of the 17 variables for which data were available for all four states, only one variable X_{22} had the same correlation sign for all four states. However 13 variables X_1, X_2, X_5, X_7, X_9, X_{10}, X_{11}, X_{12}, X_{13}, X_{16}, X_{20}, X_{21} and X_{22} had the same correlation sign in Florida, Georgia and Kentucky. This might suggest a regional pattern of association of socioeconomic variables with local effort for the years around 1960.

Table 2-9 shows the regression equations for E_7. It is noted that only one independent variable, X_5 appeared in the regression equation of more than one state. It had a negative sign in both states.

Table 2-9

Regression Equations for E_7 and Socioeconomic Variables
(E_7 for the years 1959-61 and Socioeconomic Variables for 1960)

Socioeconomic Variables	Florida	Georgia	Illinois	Kentucky
X_3 (Average daily attendance as a percent of total population)			.12495	
X_5 (State revenue receipts per pupil in ADA)		-.00636	-.00931	
X_{12} (Percent 14-17 year olds in public or private schools)				.04863
X_{19} (Percent 65 years old and over in total population)	.04778			
Constant term	1.04859	1.91430	1.92516	-2.47694
Multiple R	.561*	-.600*	.828	.611*

*Zero order correlation of the dependent variable with the single independent variable in the regression equation.

It is interesting to contrast the data in Table 2-9 with the data in Table 2-6. The data on E_5 in Table 2-6 are for the years 1949-51 and on the socioeconomic variables are for the year 1950. The data in

Table 2-9 are computed in exactly the same manner as in Table 2-6 except they are for 10 years later. If there is a consistent relationship between socioeconomic variables in a state, then the regression equations for 1950 in Table 2-6 should be similar to the regression equations for 1960 in Table 2-9. The regression equation for Florida contained four independent variables in 1950 and one in 1960 (X_{19}) which was contained in both equations; the equation for Georgia contained only one independent variable for 1950 and also 1960 but it was a different variable; the equation for Kentucky contained three independent variables in 1950 and only one in 1960 but it did not appear in the 1950 equation, and, the equation for Illinois in 1950 contained two independent variables (X_2 and X_3) and its

Table 2-10

Four-State Comparison of Significant 1960 Socio-Economic Variables as They Predict E_7

(Average local financial effort for 1960, based on Net Effective Buying Income)

	Coefficients of Separate Determination*			
Variable	Florida	Georgia	Kentucky	Illinois
X_3 (Average daily attendance as a percent of total population)				.78 (P)
X_5 (State revenue receipts per pupil in ADA)		.36 (N)		-.10 (P)
X_{12} (Percent 14-17 year old in public or private schools)			.37 (P)	
X_{19} (Percent 65 years old and over in total population)	.32 (P)			
Totals**	.32	.36	.37	.68

*The P and N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with E_7.

**The sum of the coefficients of separate determination is equal to the Multiple R^2.

equation for 1960 contained the variables X_2 and X_5. Therefore there seemed to be little or no consistency in the relationship of socioeconomic variables to local financial effort for these two periods of time.

Relationship of Socioeconomic Variables to E_2. The dependent variable E_2 was computed by dividing the local revenue receipts of a school district for 1962-63 by the estimated market value of taxable property in that district. Data for the socioeconomic variables were for the year 1960.

In order to compare effort computed by dividing revenue receipts by net effective buying income with effort computed by dividing revenue receipts by the market value of property, E_1 was computed for 1962-63. The symbol E_1 means effort computed for 1962-63 by dividing revenue receipts for 1962-63 by net effective buying income. The rank order correlation between E_1 and E_2 for Georgia was .86, Florida .64, Kentucky .69 and Illinois .33. It is noted that these two dependent variables correlate fairly well except in the state of Illinois. It is possible that the data on net effective buying income for Illinois districts were not quite as accurate as for the other three states. The school districts of Illinois included in the study did not all include exactly the same territory as was included in the political units for which Sales Management reported net effective buying income. In the other three states, the geographical limits of the school districts included in the study corresponded closely with the political units used by Sales Management. It should not be assumed however that taxpaying ability measured by net effective buying income is identical with taxpaying ability measured by the market value of taxable property.

Table 2-11 shows the zero order correlations between E_2 and the socioeconomic variables. These correlations show a little more consistency

Table 2-11

Zero Order Correlations Between Socioeconomic Variables and E_2

Socioeconomic Variable	Florida	Georgia	Illinois	Kentucky
X_1	.163	.259	-.077	.400
X_2	.502	.518	.150	.707
X_3	-.562	-.224	.043	-.341
X_4	-.154	-.121	NA*	.121
X_5	-.601	-.718	.315	-.746
X_6	-.113	.023	.118	-.484
X_7	.232	.310	.417	.784
X_8	-.220	-.031	-.018	.295
X_9	.263	.275	NA	.619
X_{10}	-.430	-.374	NA	-.742
X_{11}	-.559	-.526	NA	-.542
X_{12}	-.129	.074	.252	.575
X_{13}	.267	.239	.217	.620
X_{14}	-.075	-.529	.138	.699
X_{15}	-.246	.182	-.015	.617
X_{16}	.292	.360	.385	.560
X_{17}	.217	.343	.343	.779
X_{18}	-.078	.107	.066	-.505
X_{19}	.477	-.008	-.287	.301
X_{20}	.236	.233	NA	-.191
X_{21}	.204	.261	-.079	.343
X_{22}	.407	.075	.185	.382

*Data not available.

than those in Tables 5-5 and 5-8. Six of the 17 variables which were available for all four states (X_2, X_7, X_{13}, X_{16}, X_{17}, X_{22}) had the same correlation sign for all four states. Thirteen of the 22 independent variables had the same correlation sign in Florida, Georgia and Kentucky. However, the amount of the correlation of each variable varied so much from state to state that it is difficult to support any broad conclusion from this table. Exceptions to this might be X_5, X_{10} and X_{11}. The variable X_5 (State revenue receipts per pupil in ADA) had a fairly high negative correlation with effort in Florida, Georgia, and Kentucky but a small positive correlation in Illinois. The three southern states all provided more than half their revenue receipts from local sources in 1963 and Illinois only about 19 percent. It might be inferred from this that a large amount of state funds per pupil in ADA in the southern states had a depressing effect on local effort but that the amount provided per pupil in Illinois either was too small to have a depressing effect on effort or that the small amount of state aid in Illinois forced increases in local effort.

It is noted from Table 2-11 that X_{10} (Percent rural non-farm) and X_{11} (Percent rural) both had fairly high negative correlations with effort as measured by E_2 in the states of Florida, Georgia and Kentucky. These data suggest that the rural non-farm and the rural farm population both had a depressing effect on local effort in these three states. Data for these three variables were not available for Illinois.

The regression equations for E_2 and the socioeconomic factors are shown in Table 2-12. It will be observed that the variable X_5 appears in the regression equations for Florida, Georgia and Illinois, the variable X_7 appears in the equations for Illinois and Kentucky and X_9

Table 2-12

Regression Equations for E_2 and Socioeconomic Variables

Socioeconomic Variable	Florida	Georgia	Illinois	Kentucky
X_4 (Federal revenue receipts per pupil in ADA)		-.00498		
X_5 (State revenue receipts per pupil in ADA)	-.00270	-.00910	.00276	
X_7 (Percent of families with income of $10,000 or more)			.02502	.01885
X_9 (Population per square mile)		.00010		.00002
X_{19} (Percent 65 years old and over in total population)	.00758			
Constant term	.96928	2.01848	.40313	.37498
Multiple R	.667	.824	.636	.828

in Georgia and Kentucky. Despite these duplications of variables, no two regression equations are similar. Therefore there was no combination of socioeconomic variables that was associated with local effort as measured by E_2 in more than one state. The same thing was true of effort as measured by E_5 and E_7.

Comparison of Regression Equations for E_2, E_5 and E_7. Table 2-14 presents a summary of the socioeconomic variables appearing in the three regression equations for each of the four states. In the three regression equations for Florida, only one variable (X_{19}) appeared in as many as two equations; in the Georgia equations, one variable (X_5) appeared in two equations; in the equations for Illinois, X_3 appeared in two equations and X_5 in two, and; in the equations for Kentucky, no variable appeared in more

Table 2-13

Four-State Comparison of Significant 1960 Socio-Economic Variables as They Predict E_2

(Local financial effort, based on equalized valuation of property)

Socioeconomic Variable	Coefficients of Separate Determination*			
	Florida	Georgia	Kentucky	Illinois
X_4 (Federal revenue receipts per pupil in ADA)		.03 (N)		
X_5 (State revenue receipts per pupil in ADA)	.30 (N)	.79 (N)		.16 (P)
X_7 (Percent of families with income of $10,000 or more)			.50 (P)	.24 (P)
X_9 (Population per square mile)		−.14 (P)	.19 (P)	
X_{19} (Percent 65 years old and over in total population)	.15 (P)			
Totals**	.45	.68	.69	.40

*The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with E_2.

**The sum of the coefficients of separate determination is equal to the Multiple R^2.

than one equation. The evidence is clear that through time no combination of specific socioeconomic variables has been associated with local financial effort in any of the four states studied. It is true that through the use of step-wise multiple regression, equations could be developed that would predict for that particular period of time with some degree of reliability, variations of effort. But the independent variables were very unstable in their predictive power and would not continue as the best predictors from one period of time to another. The evidence presented in this study shows that it is very dangerous to conclude from a

Table 2-14

Summary of Socioeconomic Variables Appearing in Regression Equations for E_2, E_5 and E_7

Socioeconomic Variable	Florida			Georgia			Illinois			Kentucky		
	E_2	E_5	E_7	E_2	E_5	E_7	E_2	E_5	E_7	E_2	E_5	E_7
X_2 (Per capita net effective buying income)		X						X				
X_3 (Average daily attendance as a percent of the total population)								X	X			
X_4 (Federal revenue receipts per pupil in ADA)				X								
X_5 (State revenue receipts per pupil in ADA)	X			X		X	X		X		X	
X_7 (Percent of families with income of $10,000 or more)		X					X			X		
X_9 (Population per square mile)				X						X		
X_{11} (Percent rural farm)		X									X	
X_{12} (Percent 14-17 years old in public or private schools)												X
X_{17} (Median income of families)											X	
X_{19} (Percent 65 years and over in total population)	X		X		X							
X_{20} (Percent in ADA public schools K-12 of total population 6-17)			X									

multiple regression equation developed at one point of time that that equation is valid for predicting the dependent variable at another point in time. It is quite possible that particular independent variables may have varying effects on the dependent variable at different periods of time because variations in the evironment might cause these variables to have different effects on the dependent variable.

The above conclusion is further supported by observation of the limited number of times particular independent variables appeared in the different regression equations. Twelve regression equations are summarized in Table 2-14. Of the 22 socioeconomic variables studied, only 11 appeared in any regression equation. If any socioeconomic variable had a powerful and determinative effect on local financial effort, it should have been included in all 12 regression equations. But Table 2-14 shows that X_4, X_{12}, X_{17} and X_{20} were only included in one equation; X_2, X_3, X_9 and X_{11} in two equations; X_7 and X_{19} in three equations, and; X_5 in five equations.

Although the findings concerning the relationship between socioeconomic factors and financial effort when analyzed by multiple regression techniques for different time periods are inclusive, it is interesting to study the zero order correlations reported in Tables 2-5, 2-8 and 2-11. Those tables report the zero order correlations between three measures of income X_2, X_7 and X_{17} and three measures of effort E_2, E_5, and E_7 for each state. Therefore nine correlations between income and effort are reported for each state. Five correlations of .3 and above, all positive, are reported for Georgia; four correlations of .3 and above, all positive, are reported for Florida; six correlations of .3 and above, five of which are positive and one negative are reported for Kentucky and five correlations of .3 and above, three positive and two negative are reported for Illinois. Therefore, in general the greater the income of the people of the districts included in this study, the greater the local effort in proportion to ability to support schools. This is the reverse of the findings of many studies concerning the efforts of the states to support education. Those studies show in general that the states with the greatest per capita income make the least financial effort in proportion to ability.

Relationship of Selected Socioeconomic Variables to Elasticity of Demand.

The elasticity of demand for education was computed for two periods of time--1946-1955 which was coded D_3 and 1953-1962 which was coded D_5. The methods used in computing these elasticities were discussed earlier in this chapter.

The 22 selected socioeconomic variables for 1950 were correlated with D_3 and these same variables for 1960 were correlated with D_5. Table 2-15 shows the zero order correlations of these variables with both D_3 and D_5. An examination of Table 2-15 shows that most of these correlations were very low. In fact for the state of Florida there was not a single zero order correlation with a level of significance as great as .05 for either D_3 or D_5. Even when these correlations reached a level of significance in the other three states, their behavior was quite erratic. For example in Georgia the correlation of X_8 with D_3 was .022 but with D_5 it was -.471; the correlation of X_{17} with D_3 was -.255 and with D_5 it was .466, and, the correlation of X_{22} with D_3 was -.411 and with D_5 it was .303. Similar examples can be cited for Illinois and Kentucky. In fact there is not a single socioeconomic variable that bears the same correlation sign for all these states for both D_3 and D_5. The zero order correlations reveal no consistent patterns of relationship of the socioeconomic variables to elasticity of demand.

Table 2-15

Zero Order Correlations Between
Socioeconomic Variables and D_3

Socioeconomic Variable	Florida D_3	Florida D_5	Georgia D_3	Georgia D_5	Illinois D_3	Illinois D_5	Kentucky D_3	Kentucky D_5
X_1	.074	-.188	.049	.180	.065	.136	.473	-.209
X_2	-.007	.160	.137	.381	.177	.566	.310	.305
X_3	.113	-.335	.095	.003	-.020	-.270	-.178	-.367
X_4	-.007	-.155	.001	-.335	NA*	NA	.120	-.234
X_5	.033	-.024	.012	-.319	.246	-.585	.064	-.291
X_6	-.253	-.117	.005	-.257	.317	-.294	.215	-.213
X_7	-.109	.013	-.005	.313	.079	.331	.145	.258
X_8	.257	-.179	.022	-.471	.077	-.296	.091	-.182
X_9	.078	-.040	.024	.219	NA	NA	.388	.314
X_{10}	-.155	-.123	-.032	.045	NA	NA	-.281	-.400
X_{11}	.270	-.087	.053	.330	NA	NA	-.199	-.068
X_{12}	-.016	.036	.092	.247	.069	-.597	.230	.299
X_{13}	-.127	.009	-.110	.231	.023	.265	.142	.250
X_{14}	.115	-.068	-.156	.167	.089	.039	.182	.307
X_{15}	.287	-.230	-.039	.253	.021	.332	.252	.581
X_{16}	.103	.115	-.095	.200	-.061	-.004	.048	.067
X_{17}	-.122	.027	-.255	.466	.040	.371	.132	.379
X_{18}	.093	-.167	.044	-.185	-.018	-.032	-.028	-.408
X_{19}	-.170	.316	.162	-.136	-.217	-.264	.182	.360
X_{20}	-.163	.039	.132	.130	NA	NA	-.055	-.107
X_{21}	.067	-.165	.019	.192	.064	.132	.596	-.125
X_{22}	.060	.140	-.411	.303	-.406	.114	-.099	.138

*Data not available.

The regression equations for D_3 and D_5 are presented in Table 2-16 and the coefficients of separate determination in Table 2-17. No regression

Table 2-16

Regression Equations for D_3 and D_5
and Socioeconomic Variables

Socioeconomic Variable	Florida D_3	Florida D_5	Georgia D_3	Georgia D_5	Illinois D_3	Illinois D_5	Kentucky D_3	Kentucky D_5
X_2 (Per capita net effective buying income)				.00077		.00101		
X_4 (Federal revenue receipts per pupil in ADA)				-.04047				
X_5 (State revenue receipts per pupil in ADA)						-.00854		
X_8 (Percent of population that is non-white)				-.01936				
X_{15} (Percent engaged in manufacturing)								.02383
X_{21} (Population size)							.00001	
X_{22} (Percent population increase over 10 years period)			-.00621	.01027	-.00989			
Constant Term			.84663	1.10675	1.26960	-.14949	.47434	.14707
Multiple R			-.411**	.742	-.406**	.668	.596**	.581**

*No regression equations with significant coefficients could be developed for Florida for either D_3 or D_5.

**Zero order correlation of dependent variable with the single independent variable in the regression equation.

Table 2-17

Coefficients of Separation Determination of Socioeconomic Variables in Regression Equations for D_3 and D_5

(The P and N following the coefficients indicate positive or negative)

Socioeconomic Variables	Florida*		Georgia		Illinois		Kentucky	
	D_3	D_5	D_3	D_5	D_3	D_5	D_3	D_5
X_2 (Per capita net effective buying income)				.11(P)		.21(P)		
X_4 (Federal revenue receipts per pupil in ADA)				.19(N)				
X_5 (State revenue receipts per pupil in ADA)						.24(N)		
X_8 (Percent of population that is non-white)				.14(N)				
X_{15} (Percent engaged in manufacturing)								.34(P)
X_{21} (Population size)							.36(P)	
X_{22} (Percent population increase over 10 year period)			.17(N)	.11(P)	.17(N)			
Total**			.17	.55	.17	.45	.36	.34

*No regression equations could be developed for Florida.

**Equal to R^2.

equations are presented for Florida because no equations could be developed that had significant coefficients. It will be noted that the regression equations for Georgia, Illinois and Kentucky are quite different for D_3 and D_5. If there had been a significant pattern of relationship of certain socioeconomic variables to elasticity of demand through time, then there should have been a much closer resemblance between the regression equations for D_3 and D_5 in each state. In fact only one state, Georgia had the same variable (X_{22}) occurring in the regression equation for both D_3 and D_5.

Table 2-17 shows that only one of the regression equations predicts as much as one-half of the variation in the dependent variable. Despite the fact that the step-wise multiple regression technique developed regression equations and Multiple R' that were statistically significant for D_3 and D_5 in Georgia, Illinois and Kentucky, one suspects that the association between the socioeconomic variables and D_3 and D_5 was probably accidental and certainly not causitive in the real world. The data presented in Table 2-16 constitute further evidence of the danger of generalizing concerning the association of independent variables in a multiple regression equation with the dependent variable when the computations are made for only one period of time. Since there is so little resemblance between the regression equations for D_3 and D_5, it is concluded that no pattern of relationship between any socioeconomic variable and elasticity of demand through time was found in this study.

Relationship of Selected Socioeconomic Factors to Local Revenue Receipts Per Pupil

Numerous studies have been made over the past forty years of the causes of variations in local revenue receipts per pupil. The conclusion reached in practically all of these studies has been that some measure of wealth per pupil was more closely associated with variations in local revenue receipts per pupil than any other variable. Despite this weight of evidence the project staff decided to make at least one cross sectional study of this problem. The year 1960 was selected for obtaining data for the socioeconomic variables and revenue receipts per pupil (coded R_4).

The zero order correlations of R_4 with the socioeconomic variables

Table 2-18

Zero Order Correlations of Local Revenue Receipts Per Pupil (R_4) and Socioeconomic Variables (All data for 1960)

Socioeconomic Variable	Florida	Georgia	Illinois	Kentucky
X_1	.456	.637	.045	.404
X_2	.738	.838	.572	.889
X_3	-.700	-.626	-.646	-.618
X_4	-.281	-.080	NA*	.022
X_5	-.659	-.728	-.692	-.846
X_6	-.005	-.098	.448	-.665
X_7	.349	.758	.605	.859
X_8	-.384	.034	-.105	.434
X_9	.360	.641	NA	.733
X_{10}	-.606	-.586	NA	-.889
X_{11}	.566	-.531	NA	-.538
X_{12}	.036	.161	-.116	.476
X_{13}	.375	.489	.434	.681
X_{14}	-.067	.393	.406	.865
X_{15}	-.325	-.293	-.045	.691
X_{16}	.418	.816	.365	.630
X_{17}	.288	.565	.533	.872
X_{18}	-.100	.003	.113	-.551
X_{19}	.511	.079	-.191	.410
X_{20}	.185	-.027	NA	-.431
X_{21}	.496	.658	.048	.507
X_{22}	.417	.151	.236	.437

*Data not available.

are set forth for the four states in Table 2-18. The similarity of the high correlations for certain variables in all of the states is apparent. For example X_2 (per capita net effective buying income), and X_7 (percent of families with income of $10,000 or more) all have fairly high positive correlations with R_4 for all four states. These variables are both measures of wealth. On the other hand X_3 (average daily attendance as a percent of total population) and X_5 (state revenue receipts per pupil in ADA) both have high negative correlations with R_4 in all four states. These variables are both negatively associated with per capita wealth. The variable X_{10} (percent rural non-farm) which was available for three states also had a high negative correlation with R_4 and it was negatively correlated with measures of wealth. Therefore the data presented in Table 2-18 strongly support the conclusion reached in numerous other studies that the variable local revenue receipts per pupil in average daily attendance is strongly associated with measures of wealth (or lack of wealth).

Table 2-19

Regression Equations for R_4 with Socioeconomic Variables

Socioeconomic Variable	Florida	Georgia	Illinois	Kentucky
X_2 (Per capita net effective buying income)	.14457	.07357		.08815
X_3 (ADA as percent of total population)		-4.73911	-4.75740	
X_5 (State revenue receipts per pupil in ADA)			-.86062	
X_7 (Percent of families with income $10,000 or more)			8.96952	
X_{10} (Percent rural non-farm)				-1.08031
X_{19} (Percent 65 years old and over total population)	4.68263			
X_{21} (Population size)		.00011	-.00003	
Constant Term	140.21601	56.16569	440.49076	36.73878
Multiple R	.851	.898	.886	.932

Table 2-19 shows the regression equations of R_4 with the socioeconomic variables and Table 2-20 the coefficients of separate determination. It will be observed from Table 2-19 that of the 11 regression coefficients in the four equations presented, 8 are for variables X_2, X_3, X_5, X_7 and X_{10} and all of these variables are associated either positively or negatively with some measure of wealth. Table 2-20 shows that these same variables account for all or for more than one-half of the explained variations in

Table 2-20

Four-State Comparison of Significant 1960 Socio-Economic Variables as They Predict R_4

(Total local school revenue receipts per pupil in average daily attendance)

Socioeconomic Variable	Coefficients of Separate Determination*			
	Florida	Georgia	Kentucky	Illinois
X_2 (Per capita net effective buying income)	.50(P)	.49(P)	.43(P)	
X_3 (Average daily attendance as a percent of total population)		.17(N)		.26(N)
X_5 (State revenue receipts per pupil in ADA)				.25(N)
X_7 (Percent of families with income of $10,000 or more)				.29(P)
X_{10} (Percent rural non-farm)			.43(N)	
X_{19} (Percent 65 years old and over in total population)	.22(P)			
X_{21} (Population size)		.15(P)		-.01(P)
Totals**	.72	.81	.86	.79

*The P or N following each coefficient of separate determination indicates a positive or negative zero-order relationship, respectively, with R_4.

**The sum of the coefficients of separate determination is equal to the Multiple R^2.

R_4 in all four states. Therefore the evidence presented shows clearly that most of the variation in local revenue receipts per pupil in these four states was explained by variables associated either positively or negatively with per capita wealth. The project staff decided that it was unnecessary to make another cross sectional study at another point in time of the relationship between socioeconomic variables and local revenue receipts per pupil because the findings of this study on this relationship corresponded so closely with the findings of numerous other studies. It should not be assumed from this statement that the project staff has concluded that regression equations for these four states for predicting revenue receipts per pupil in ADA will contain exactly the same independent variables in each state with similar weights in the year 1970. However the evidence presented in this study which is supported by numerous other studies indicates that the best predictors of local revenue receipts per pupil in average daily attendance will be variables associated with wealth or income.

Summary

Following is a brief summary of the conclusions reached with respect to the hypotheses tested by examining the data for each of four states separately.

1. Hypothesis 1. Most of the districts selected for study have followed relatively consistent patterns of financial effort and elasticity of demand over a period of years.

The first part of this hypothesis was sustained. It was found that 88 of the 122 districts studied followed relatively consistent effort patterns during the 18 year period of time studied. That is the high effort districts continued as high effort districts as compared with the median state effort, low effort districts were consistently low effort districts and median effort districts were consistently median effort districts.

The second part of this hypothesis was not sustained. There was no consistency among districts in the coefficient of elasticity of demand for education in the first part of the period studied as compared with the second part of the period.

2. Hypothesis 2. Local school fiscal policies concerning: (a) financial effort in proportion to ability, (b) elasticity of demand for education and (c) local revenue receipts provided per pupil are related to socioeconomic factors.

Hypothesis 2 (a) was not confirmed. Regression equations for each state for two periods of time (1950 and 1960) were computed. Regression equations were developed for each state for the two periods of time which purported to explain a significant portion of the variance in effort of its districts. However the regression equation of a state for 1950 had but little resemblance to its regression equation for 1960 because most of the independent variables that appeared in its equation for 1950 did not appear in 1960. Furthermore there was no variable that consistently appeared in the equations for all four states. Therefore it was concluded that no combination of socioeconomic variables through time has had a determinative effect on variations in local effort in the four states studied. This study demonstrates the danger of assuming that a regression equation computed at one period of time is valid for predicting the dependent variable at another period of time. This is particularly true in the fluid area of decision making on school finance which is undoubtedly affected by interacting variables which interact with each other with different power at different time periods.

Hypothesis 2 (b) was not confirmed. Elasticity of demand was computed for two periods of time 1946-1955 and 1954 - 1963. Regression equations were developed for two periods of time. These regression equations had little or no predictive power for the most part and the independent variables that appeared in the regression equation for a state during the period 1946-1955 seldom appeared in the equation for that state for 1954 - 1963. Therefore it was concluded that no pattern of socioeconomic variables was associated through time with elasticity of demand for education.

Hypothesis 2 (c) was confirmed. Measures of per capita income explained more of the variance in local revenue receipts per pupil than all other socioeconomic variables studied combined. This was true in all four states studied. This finding corresponds with the conclusions of munerous other studies that measures of per capita income or per capita wealth explain most of the variations among local school districts in local revenue receipts per pupil.

3. Hypothesis 3. Although multiple regression techniques did not produce a stable set of socioeconomic factors that could be used for different time periods for predicting local effort in proportion to ability, zero order correlations between local effort and certain socioeconomic factors were signficant. For example there was a significant tendency among the districts included in this study for the districts with the greatest income per capita or per family to make the greatest effort in proportion to ability to support schools. This is the reverse of the tendency among the states for in general the states with the greatest per capita or per family income make the least effort in proportion to ability to support schools.

CHAPTER 3

THE RELATIONSHIP OF SELECTED SOCIOECONOMIC FACTORS TO LOCAL SCHOOL FISCAL POLICY--FOUR STATES ANALYZED TOGETHER[1]

In Chapter 2, the findings of studies testing certain hypotheses concerning local school policies were presented. Each of these studies was replicated for each state. That is each state was considered as a different universe. This procedure had the advantage of permitting the project staff to study each state separately through time and compare the findings from each state with the findings in each of the other three states. However it had the statistical disadvantage of limiting the number of frequencies (number of districts) available for analysis in each state to from 28 to 33. Therefore it was decided to combine the data for the four states which provided a frequency for each variable of 122 and test the same hypotheses tested in Chapter 2. Following are the hypotheses tested:

(1) Most of the districts selected for study have followed relatively consistent patterns of financial effort and elasticity of demand over a period of years.

(2) Local school fiscal policies concerning: (a) financial effort in proportion to ability; (b) elasticity of demand for education and (c) the local revenue receipts provided per pupil are related to socioeconomic factors.

Procedures

The combination of the data from four states into one sample had the advantage of increasing the size of the sample but it had certain disadvantages. The statistical methods used in analyzing the data are discussed in the following paragraphs.

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[1] The material for this chapter was largely abstracted from a doctoral dissertation by Julian M. Davis entitled, "Relationship of Selected Socioeconomic Factors to School Fiscal Policy" (Gainesville, Florida; College of Education, University of Florida, 1967).

The principal statistical problem encountered by the staff in combining the data from the four states was wide variations among the states in the means of both the dependent variables and the independent variables. The variation in the means of the dependent variables were particularly troublesome. For example the mean of E_7 (average local effort computed by dividing local revenue receipts by net effective buying income for the period 1959-61) of Florida was 1.573; of Georgia .940; of Illinois 3.422, and for Kentucky 1.393. Therefore the data were definitely stratified for each state. Extraneous factors undoubtedly influenced the variables differently in the different states. For example wide differences among the states in per capita wealth and income, in legal restrictions upon levels of local taxation and in percent of school revenue provided by the state were among the factors that caused the stratification of the raw data. The effects of such extraneous factors had to be removed if the correlations were to be meaningful. The method chosen for placing the raw data for the districts of the four respective states on a comparable basis was transformation from raw values to Z values using the simple formula

$$Z \text{ value} = \frac{X - M}{SD}$$

where X is the raw value of the variable being transformed, M is the mean of the variable, and SD is the standard deviation of its distribution. Transformations of variables from the four states were made separately and the resultant Z values provided bases sufficiently comparable to permit the data to be combined for composite analysis.

Drawbacks in the use of standardized data were recognized. While standardization eliminated deviations caused by extraneous effects, it was likely that some of the sought-for deviation, that which was caused by the selected socioeconomic factors, was also eliminated. Furthermore, it was necessary to proceed on the assumption that the forms of distribution for the different states were nearly identical, which is highly improbable. However, as Guilford[2] points out, "In spite of these limitations, it is almost certain that derived scales, such as the standard-score scale, provide us with more nearly comparable values than do raw-score scales." Although the project staff believes that the conclusions of the study based on standard scores are more valid than those based on raw scores it was decided to compute the relationships in both forms, first using raw data and then using standard scores.

As was pointed out in Chapter 2, five of the 22 independent variables which were available for Florida, Georgia and Kentucky were not available for Illinois. Therefore only 17 independent socioeconomic variables could be used when the data for the four states were combined. The variables eliminated were X_4, X_9, X_{10}, and X_{20}. Of the nine regression equations for three states on three measures of effort X_4 appeared only once as a significant variable, X_9 twice, X_{12} twice, X_{20} once and X_{10} not at all. These variables did not appear to be very important and therefore it is not believed that their elimination from the combined sample had any serious effect on the conclusion reached in this chapter. The codings for both the independent variables and the dependent variables were presented in Chapter 2.

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[2] J. P. Guilford, Fundamental Statistics in Psychology and Education, (New York: McGraw-Hill Book Company, 1965).

The statistical procedures used in this chapter for the analysis of both raw and standardized data were identical to those used in Chapter 2 with the following exceptions:

(1) The step-wise regression equations for 1960 were computed by two methods as follows: (a) they were first computed by the use of both the F test and the T test for the rejection of non-significant variables which was the same method used in Chapter 2 and (b) they were computed by using the F test only and eliminating the .05 t test level of significance.

(2) The contribution of each independent variable to total variance was expressed in a positive quantity. In computing the coefficient of separate determination for a variable, if the Beta coefficient and the regression coefficient of that variable have different signs, the coefficient of separate determination will have a negative sign. This negative sign was eliminated by computing the contribution of each variable to total variance regardless of sign.

Summary of Findings

The findings resulting from combining the data for the states of Florida, Georgia, Illinois and Kentucky are reported in the remainder of this chapter.

Consistency of Financial Effort in Relation to Ability.

The consistency of local effort was analyzed by comparing the average effort of each of the 122 districts for 1949, 1950 and 1951 (E_5) with its average effort for 1959, 1960 and 1961 (E_7). The data were not converted to standard scores for this analysis but the raw scores for E_5 and E_7 were converted to rank scores.

As might be suspected, there was considerable variation in financial effort among districts. The highest among the 122 districts had an effort score more than fifteen times as high as that of the lowest. This is shown by Table 3-1 which, in addition to ranking the districts by level of financial effort (E_7) shows the specific effort ranking of each district and the change in ranking during the previous ten years. The ranking change was computed by comparing E_7 and E_5 rankings. A summary of these changes show that out of 122 ranks, a majority of 69 districts experienced ranking changes of less than 15 places. Furthermore, 105 of the districts changed less than 30 places, indicating high stability of effort. High effort districts tended to remain high, and low effort districts tended to remain low. A few districts made marked changes in relative position over the ten year time span. Seven districts changed in rank by more than forty places.

The rank order correlation between E_5 and E_7 was .77589. This is a highly significant correlation. In summary, the analysis confirmed the first part of hypothesis (1) "that most of the districts selected for study followed relatively consistent patterns of financial effort..." However there were some districts that made dramatic changes in effort during the decade studied. Therefore the conclusions reached concerning consistency of financial effort when the data for the four states were combined were the same as the conclusions reached when the data were treated separately for each state.

Special Study of Seven School Districts That Made Dramatic Changes in School Fiscal Policy. The project staff made a special study of selected school districts that had experienced significant shifts in local fiscal policy between 1946 and 1963. Seven of the 122 school

Table 3-1
Rankings of 1960 Financial Effort (E_7) And Changes in Rank Since 1950

Dist.	E_7	Rank	Chg.	Dist.	E_7	Rank	Chg.	Dist.	E_7	Rank	Chg.	Dist.	E_7	Rank	Chg.	Dist.	E_7	Rank	Chg.
412	5.226	1	+ 8	308	2.573	26	+32	221	1.622	51	+40	226	1.260	76	0	208	0.856	101	+ 8
404	4.447	2	- 1	408	2.572	27	- 3	123	1.606	52	-30	319	1.243	77	+10	307	0.849	102	-84
426	4.430	3	0	423	2.550	28	+31	324	1.598	53	+37	108	1.227	78	+10	326	0.837	103	-10
409	4.123	4	+ 9	130	2,440	29	+27	325	1.591	54	+11	207	1.189	79	+40	213	0.803	104	+ 4
418	4.118	5	+15	425	2.437	30	+15	316	1.581	55	0	216	1.182	80	+30	315	0.782	105	-21
413	3.946	6	+ 6	104	2.222	31	-21	118	1.566	56	- 8	227	1.178	81	- 8	113	0.764	106	- 2
427	3.853	7	+ 7	310	2.185	32	+20	119	1.558	57	-30	215	1.166	82	+30	214	0.732	107	+ 8
416	3.846	8	+45	115	2.143	33	- 7	103	1.550	58	+16	107	1.159	83	-14	228	0.716	108	- 6
410	3.779	9	- 4	110	2.091	34	-30	132	1.504	59	-21	116	1.150	84	+17	212	0.700	109	+ 5
402	3.706	10	+22	126	2.036	35	+14	101	1.503	60	+23	109	1.134	85	+15	204	0.681	110	- 3
414	3.660	11	+ 8	106	2.011	36	- 7	311	1.491	61	+14	229	1.127	86	- 1	232	0.672	111	-22
403	3.640	12	+ 9	117	2.007	37	+ 4	327	1.483	62	-54	322	1.110	87	-24	231	0.653	112	+ 1
411	3.632	13	- 6	114	1.987	38	+16	121	1.474	63	-12	328	1.097	88	-27	203	0.639	113	+ 8
401	3.545	14	- 8	125	1.947	39	0	318	1.453	64	+ 6	219	1.051	89	+28	321	0.624	114	-43
417	3.517	15	+ 2	112	1.841	40	+ 7	304	1.436	65	+13	222	1.047	90	-28	205	0.623	115	+ 7
419	3.436	16	+ 7	407	1.835	41	+ 9	312	1.430	66	-26	217	1.036	91	+ 3	306	0.619	116	-70
428	3.234	17	-15	220	1.818	42	+25	309	1.423	67	+14	230	1.016	92	+11	201	0.611	117	- 3
424	3.058	18	+15	128	1.801	43	+14	131	1.398	68	-25	129	1.006	93	-29	233	0.547	118	- 2
421	3.033	19	+12	122	1.789	44	0	320	1.386	69	+21	329	0.986	94	-17	225	0.436	119	-40
415	3.012	20	- 9	302	1.769	45	+27	111	1.383	70	-10	102	0.978	95	- 9	314	0.374	120	-22
422	2.970	21	+21	301	1.764	46	-31	218	1.365	71	+35	202	0.977	96	+ 9	120	0.346	121	-55
406	2.789	22	+15	105	1.762	47	+35	209	1.330	72	+28	212	0.952	97	+17	206	0.338	122	-25
420	2.788	23	+11	313	1.718	48	-30	303	1.320	73	+22	224	0.926	98	+10				
317	2.701	24	+ 6	323	1.702	49	-13	127	1.293	74	+22	210	0.893	99	-74				
405	2.639	25	+10	124	1.663	50	+18	305	1.286	75	-47	223	0.879	100	+11				

districts that had undergone the most dramatic changes in school fiscal policy during the eighteen year period were selected for special study. All of these districts experienced significant increases in local financial effort for education. Three of the districts were located in Florida, two were in Georgia, and two were in Illinois.

The staff hypothesized (see Chapter 1) that the changes were the result of such factors as changes in the power structure, changes in the leadership of the superintendent and board of education, and other identifiable changes in the community and school social systems.

The staff spent much time in discussing how to discover the conditions which resulted in the dramatic change in local financial effort of the seven districts. The decision was made to employ the case study approach to assess those factors which contributed to the changes in fiscal policy in each district. Much of the data were obtained through extensive personal interviews. Documentary evidence was used such as tax records, school board minutes, newspapers, and other documents. The results of these studies were compiled by Ficker[3] a member of the project staff.

The case studies provided some very interesting findings. As one would expect, there were many forces and conditions within the districts which influenced the observed changes. Thus, there was difficulty in trying to generalize for the seven districts. In one district, for example, the school personnel exercised no leadership in bringing about change. In fact, the school leaders in this district lacked accurate knowledge of the forces and political conditions resulting in increased effort for education. On the other hand, the school superintendents of four of the districts were important leaders in promoting changes in fiscal policies.

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[3] Victor B. Ficker, Factors Contributing to Change in Fiscal Support in Seven Selected School Districts, Doctoral dissertation, (Gainesville, Florida: College of Education, University of Florida, 1967).

Economic leaders were influential in bringing about change in effort in six of the seven districts. Other factors noted were significant changes in the population (two districts) and level of community awareness of school conditions (four districts).

However, attempting to generalize about such factors as leadership of the superintendent and business leader involvement independent of an understanding of the total system would be misleading. Certainly the leadership of the business community, superintendents' leadership, changes in the school board, and community awareness of school conditions were noticeable conditions contributing to changes in school fiscal policy in the districts studied. Nevertheless, we must conceptualize these and other factors as variables in interacting social systems. These studies demonstrated that changes in school fiscal policies usually involved action by elements in the larger political system. Thus, the schools are influenced in school fiscal policies by forces outside the school system.

The activity of leaders from the business interests of the community was the most prevalent political force involved in changes in school fiscal policies. Businessmen were involved in all but one of the school districts studied. In three of the districts the businessmen were primarily interested in property revaluation to reduce what they considered to be inequitable tax burdens on business property. This revaluation increased assessments and spread more of the tax burden among all property owners, giving the schools greater tax sources. In two of the districts the business leaders took positive action to improve schools under the idea that good schools mean community growth. The businessmen in one of the districts were openly hostile to increases in financial support for schools.

The superintendent of schools provided the most prevalent source of leadership for change from within the school system. As mentioned above, the leadership of the superintendent was considered decisive in bringing about increases in local financial effort in four of the districts. However, in two districts the leadership of school superintendents represented more negative than positive influence.

Consistency of Elasticity of Local Demand for Education

The consistency of elasticity of local demand for education was analyzed by comparing the elasticity ranking of each of the 122 districts for the period 1946-55 (D_3) with its ranking for the period 1954-63 (D_5).

Table 3-2 presents the raw data for D_5, the rank in elasticity of demand for the E_5 period and the change in elasticity rank between D_3 and D_5. Only 52 of the 122 districts changed position by as few as 30 places. Forty of the districts changed by more than 50 percent of the full range of rankings and six changed by more than 100 places. The rank order correlation between D_3 and D_5 was only -.14636 which was not statistically significant. Therefore, the second part of hypothesis (1) "That most of the districts have followed relatively consistent patterns of elasticity of demand..." was not confirmed. This is consistent with the conclusions reached in Chapter 2 when the data for each state were treated separately.

Relationship of Socioeconomic Factors to Local School Financial Effort

In the remainder of this chapter, all statistical computations are made first by using raw scores and second by using standard scores (Z values). The zero order correlations between all of the variables examined are reported in Tables 3-3, 3-4, 3-5 and 3-6. Tables 3-3 and 3-5 are for the same period of time but Table 3-3 presents the intercorrelations of the raw scores and Table 3-5 the Z scores. The same is true of Tables 3-4 and 3-6. When the correlations of the raw scores are compared with the correlations of the Z scores, wide differences are apparent. For example, in Table 3-3 it is noted that the correlation between X_2 and E_5 is .218 but when the data are converted to Z scores, Table 3-5 shows a correlation between X_2 and E_5 of -.330.

The relationship between socioeconomic factors and local effort is examined for the combined data for two periods of time, 1950 and 1960.

The Relationship of Socioeconomic Factors for 1950 to Average Financial Effort for 1949, 1950 and 1951 (E_5). Two separate regression equations were computed relating the dependent variable E_5 to the 17 selected socioeconomic variables. The regression equation and other significant findings using raw data are reported in Table 3-7 and the same information based on Z scores is reported in Table 3-8.

It is interesting to notice from Tables 3-7 and 3-8 that the regression using raw data found entirely different significant independent variables related to financial effort E_5 than did the regression using Z values. Significants in the former, with their respective contributions toward variance, were X_{19}, 0.1768; X_8, 0.1124; X_7, 0.0678; and X_3, 0.0481; total variance, 0.4051. In the latter, significant variables were X_{16}, 0.1290; X_2, 0.1092; and X_{17}, 0.0500; total variance of 0.2882. It is obvious that standardization of data from raw form to Z values has had a tremendous impact on the results. As has been pointed out earlier, however, Z values are more comparable from state to state than are raw data. They therefore can be expected to give a truer indication of dispersion of actual distribution with respect to the influences of the selected independent variables.

Table 3-2

Rankings of 1960 Elasticities of Demand (D_5) and
Changes in Rank Since 1950

Dist.	D_5	Rank	Chg.	Dist.	D_5	Rank	Chg.	Dist.	D_5	Rank	Chg.	Dist.	D_5	Rank	Chg.	Dist.	D_5	Rank	Chg.
210	4.73	1	+104	409	1.70	26	+ 12	218	1.21	51	- 35	418	0.78	76	- 64	131	0.44	101	+ 14
223	3.34	2	+109	309	1.70	27	+ 36	410	1.17	52	+ 17	325	0.77	77	- 66	113	0.43	102	- 58
420	2.88	3	+ 24	422	1.68	28	- 3	211	1.17	53	+ 29	120	0.77	78	+ 35	428	0.38	103	+ 19
220	2.66	4	+ 64	119	1.67	29	+ 62	229	1.16	54	+ 18	231	0.76	79	- 46	310	0.37	104	- 62
216	2.61	5	+ 62	419	1.67	30	+ 21	403	1.13	55	- 52	426	0.72	80	+ 32	413	0.36	105	- 79
224	2.38	6	+ 34	222	1.66	31	+ 64	305	1.08	56	+ 28	111	0.71	81	- 23	408	0.35	106	+ 15
130	2.34	7	+ 67	104	1.56	32	- 15	424	1.07	57	- 10	414	0.70	82	- 71	215	0.35	107	- 26
209	2.30	8	+109	127	1.56	33	+ 53	421	1.05	58	+ 8	329	0,68	83	- 31	311	0.34	108	+ 10
233	2.28	9	+ 98	208	1.55	34	- 30	425	1.05	59	- 14	406	0.67	84	- 25	227	0.34	109	- 44
226	2.24	10	+ 67	122	1.55	35	+ 73	110	1.03	60	+ 32	107	0.63	85	+ 17	317	0.27	110	- 16
219	2.16	11	+ 32	129	1.53	36	+ 70	308	1.02	61	- 8	405	0.63	86	- 54	102	0.24	111	-103
105	2.16	12	+ 12	124	1.42	37	- 6	303	1.02	62	- 7	320	0.63	87	- 39	201	0.22	112	- 70
115	2.11	13	+ 80	202	1.40	38	- 24	415	1.01	63	- 40	204	0.62	88	+ 13	315	0.15	113	- 23
117	2.10	14	+ 69	302	1.37	39	- 2	213	1.00	64	- 45	118	0.62	89	- 54	301	0.13	114	- 27
232	2.07	15	+ 85	402	1.37	40	- 35	304	0.97	65	- 1	132	0.61	90	+ 20	322	0.12	115	- 81
128	2.03	16	+103	206	1.36	41	+ 68	112	0.97	66	+ 19	101	0.58	91	- 89	307	0.06	116	- 17
205	1.99	17	+ 42	407	1.36	42	- 22	217	0.93	67	- 5	412	0.58	92	- 70	323	0.01	117	- 20
108	1.96	18	+ 57	114	1.34	43	+ 53	214	0.92	68	- 12	324	0.56	93	- 83	326	-0.01	118	- 77
427	1.86	19	+ 57	230	1.27	44	- 26	103	0.87	69	+ 5	126	0.55	94	- 64	321	-0.14	119	- 62
221	1.85	20	+ 29	423	1.27	45	- 6	109	0.85	70	- 64	417	0.53	95	- 25	411	-0.14	120	- 91
123	1.85	21	+ 39	316	1.26	46	- 10	319	0.83	71	0	318	0.49	96	- 95	314	-0.43	121	- 43
228	1.83	22	+ 66	313	1.24	47	+ 51	225	0.81	72	- 42	327	0.49	97	+ 6	306	-0.52	122	- 42
212	1.81	23	+ 81	121	1.24	48	+ 62	203	0.81	73	- 27	312	0.48	98	+ 18				
207	1.77	24	+ 65	125	1.23	49	+ 5	401	0.80	74	- 59	328	0.48	99	- 86				
116	1.71	25	- 18	404	1.23	50	+ 29	106	0.79	75	- 47	416	0.46	100	- 79				

Table 3-3

Zero Order Correlation Matrix of 1950 Variables Expressed in Raw Form

VARIABLE	E_5	X_1	X_2	X_3	X_5	X_6	X_7	X_8	X_{12}	X_{13}	X_{14}	X_{14}	X_{16}	X_{17}	X_{18}	X_{19}	X_{21}	X_{22}	O_3
E_5	1.000	-0.011	0.218	0.085	0.003	0.055	0.313	-0.401	0.331	0.298	-0.063	0.008	0.221	0.349	-0.155	0.420	-0.006	-0.029	-0.146
X_1		1.000	0.200	-0.198	-0.078	0.132	0.234	0.032	0.120	0.088	0.129	0.076	0.050	0.162	0.283	-0.054	0.994	-0.004	0.099
X_2			1.000	-0.602	-0.334	0.033	0.797	-0.136	0.720	0.712	0.643	0.307	0.619	0.642	0.260	0.469	0.206	-0.002	0.223
X_3				1.000	0.323	-0.046	-0.514	0.058	-0.298	-0.505	-0.410	-0.119	-0.358	-0.312	-0.289	-0.290	-0.217	-0.095	-0.189
X_5					1.000	-0.084	-0.239	0.326	0.031	-0.068	-0.123	-0.427	-0.104	-0.491	-0.126	0.066	-0.097	0.285	-0.122
X_6						1.000	-0.039	-0.023	0.084	0.008	-0.001	-0.019	-0.199	0.027	0.105	0.010	0.106	-0.014	-0.128
X_7							1.000	-0.164	0.617	0.744	0.501	0.101	0.663	0.575	0.239	0.375	0.234	0.148	0.130
X_8								1.000	-0.163	-0.305	0.390	-0.288	-0.118	-0.423	0.389	-0.167	0.011	0.139	-0.003
X_{12}									1.000	0.680	0.463	0.170	0.538	0.479	0.025	0.562	0.125	0.080	0.129
X_{13}										1.000	0.315	-0.070	0.699	0.474	0.092	0.364	0.086	0.417	0.078
X_{14}											1.000	0.367	0.359	0.383	0.394	0.243	0.128	0.134	0.096
X_{15}												1.000	-0.039	0.601	0.029	0.042	0.097	-0.269	0.172
X_{16}													1.000	0.244	0.169	0.255	0.061	0.233	0.088
X_{17}														1.000	-0.022	0.169	0.171	0.008	0.078
X_{18}															1.000	-0.140	0.254	0.043	0.067
X_{19}																1.000	-0.028	-0.182	0.026
X_{21}																	1.000	-0.025	0.103
X_{22}																		1.000	-0.140
O_3																			1.000

Table 3-4

Zero Order Correlation Matrix
of 1960 Variables Expressed in Raw Form

VARIABLE	E_7	X_1	X_2	X_3	X_5	X_6	X_7	X_8	X_{12}	X_{13}	X_{14}	X_{15}	X_{16}	X_{17}	X_{18}	X_{19}	X_{21}	X_{22}	D_5	R_4
E_7	1.000	-0.012	0.636	0.186	-0.454	-0.211	0.588	-0.338	0.327	0.352	0.199	0.245	0.447	0.608	-0.543	0.444	-0.008	-0.031	-0.057	0.861
X_1		1.000	0.276	-0.215	-0.164	-0.004	0.261	0.121	0.083	0.207	0.147	-0.020	0.044	0.159	0.124	0.002	0.984	0.115	0.034	0.155
X_2			1.000	-0.318	-0.710	-0.444	0.871	-0.230	0.341	0.706	0.538	0.238	0.632	0.837	-0.557	0.220	0.264	0.131	0.106	0.847
X_3				1.000	0.291	0.184	-0.171	-0.014	0.154	-0.264	-0.182	0.071	-0.188	-0.166	0.117	-0.149	-0.239	-0.103	-0.000	-0.217
X_5					1.000	0.291	-0.629	0.235	-0.120	-0.284	-0.446	-0.447	-0.354	-0.685	0.247	-0.086	-0.182	0.139	-0.154	-0.649
X_6						1.000	-0.472	-0.138	-0.369	-0.367	-0.663	-0.285	-0.345	-0.495	0.311	-0.109	-0.005	-0.235	-0.311	-0.326
X_7							1.000	-0.220	0.422	0.715	0.506	0.217	0.639	0.874	-0.502	0.079	0.249	0.240	0.114	0.749
X_8								1.000	0.074	-0.154	0.387	-0.281	-0.116	-0.347	0.397	-0.125	0.098	0.027	0.031	-0.333
X_{12}									1.000	0.480	0.450	0.126	0.362	0.384	-0.324	0.239	0.057	0.191	0.245	0.300
X_{13}										1.000	0.417	-0.109	0.610	0.604	-0.571	0.107	0.165	0.514	0.083	0.520
X_{14}											1.000	0.337	0.358	0.492	-0.145	-0.026	0.137	0.101	0.330	0.346
X_{15}												1.000	-0.097	0.440	-0.069	-0.100	0.011	-0.188	0.294	0.237
X_{16}													1.000	0.489	-0.459	0.170	0.049	0.077	0.013	0.637
X_{17}														1.000	-0.540	0.048	0.162	0.144	0.153	0.730
X_{18}															1.000	-0.279	0.101	-0.215	-0.005	-0.578
X_{19}																1.000	0.020	0.077	0.003	0.418
X_{21}																	1.000	0.056	0.030	0.170
X_{22}																		1.000	0.178	-0.016
D_5																			1.000	-0.007
R_4																				1.000

Table 3-5

Zero Order Correlation Matrix of 1950 Variables Expressed As Z Values

VARIABLE	ϵ_5	x_1	x_2	x_3	x_5	x_6	x_7	x_8	x_{12}	x_{13}	x_{14}	x_{15}	x_{16}	x_{17}	x_{18}	x_{19}	x_{21}	x_{22}	D_3
ϵ_5	1.000	0.038	-0.330	0.255	0.075	0.060	-0.041	-0.136	-0.120	-0.091	-0.136	-0.102	-0.098	0.171	-0.067	-0.051	0.009	0.144	-0.317
x_1		1.000	0.354	-0.262	-0.266	0.250	0.323	0.091	0.141	0.136	0.207	0.054	0.107	0.311	0.435	-0.176	0.981	0.027	0.167
x_2			1.000	-0.629	-0.635	0.093	0.722	0.161	0.510	0.679	0.650	0.117	0.662	0.451	0.403	0.167	0.414	0.123	0.208
x_3				1.000	0.509	-0.070	-0.531	-0.161	-0.214	-0.549	-0.510	-0.025	-0.492	-0.308	-0.385	-0.186	-0.366	-0.293	-0.086
x_5					1.000	-0.175	-0.520	-0.129	-0.314	-0.498	-0.503	-0.105	-0.405	-0.417	-0.315	-0.100	-0.300	-0.291	-0.082
x_6						1.000	0.016	0.056	0.150	0.051	0.084	0.081	-0.079	0.180	0.106	0.002	0.230	-0.041	-0.106
x_7							1.000	0.042	0.453	0.654	0.526	-0.066	0.690	0.470	0.358	0.091	0.363	0.251	0.080
x_8								1.000	-0.155	-0.161	0.406	-0.142	0.117	-0.276	0.478	0.073	0.116	-0.150	0.103
x_{12}									1.000	0.576	0.220	0.080	0.510	0.325	0.043	0.266	0.175	0.087	0.092
x_{13}										1.000	0.304	-0.097	0.800	0.444	0.190	0.061	0.208	0.553	0.033
x_{14}											1.000	0.181	0.401	0.266	0.426	0.163	0.261	0.008	0.125
x_{15}												1.000	-0.249	0.397	0.015	0.055	0.080	-0.167	0.192
x_{16}													1.000	0.188	0.353	0.157	0.168	0.424	0.034
x_{17}														1.000	0.016	-0.047	0.342	0.227	-0.008
x_{18}															1.000	-0.090	0.447	0.053	0.079
x_{19}																1.000	-0.095	-0.270	0.016
x_{21}																	1.000	0.064	0.186
x_{22}																		1.000	-0.143
D_3																			1.000

Table 3-6

Zero Order Correlation Matrix of 1960 Variables Expressed As Z Values

VARIABLE	E_7	X_1	X_2	X_3	X_5	X_6	X_7	X_8	X_{12}	X_{13}	X_{14}	X_{15}	X_{16}	X_{17}	X_{18}	X_{19}	X_{21}	X_{22}	D_5	R_4
E_7	1.000	0.178	0.192	0.019	-0.306	-0.084	0.247	-0.036	0.200	0.081	0.127	0.081	0.213	0.237	-0.069	0.242	0.151	0.220	0.235	0.530
X_1		1.000	0.468	-0.239	-0.381	0.054	0.390	0.151	0.087	0.256	0.195	0.003	0.167	0.266	0.261	-0.109	0.975	0.085	-0.043	0.396
X_2			1.000	-0.592	-0.711	-0.256	0.781	-0.071	0.151	0.722	0.448	0.043	0.592	0.687	-0.229	-0.088	0.507	0.362	0.250	0.763
X_3				1.000	0.524	0.198	-0.358	-0.057	0.121	-0.413	-0.219	0.079	-0.416	-0.303	0.114	-0.247	-0.333	-0.183	-0.152	-0.639
X_5					1.000	0.138	-0.575	0.058	-0.106	-0.472	-0.391	-0.102	-0.360	-0.510	0.097	-0.118	-0.409	-0.313	-0.285	-0.730
X_6						1.000	-0.375	0.056	-0.097	-0.230	-0.323	-0.069	-0.324	-0.375	0.114	-0.129	0.018	-0.274	-0.151	-0.289
X_7							1.000	-0.102	0.284	0.717	0.422	0.130	0.647	0.808	-0.226	-0.170	0.394	0.529	0.171	0.640
X_8								1.000	-0.006	-0.150	0.383	-0.240	0.095	-0.258	0.321	0.065	0.165	-0.208	-0.287	-0.013
X_{12}									1.000	0.340	0.257	0.080	0.242	0.228	-0.192	0.073	0.074	0.028	0.152	0.121
X_{13}										1.000	0.404	-0.043	0.687	0.604	-0.412	-0.217	0.265	0.492	0.104	0.492
X_{14}											1.000	0.111	0.382	0.328	0.132	-0.020	0.217	0.034	0.097	0.388
X_{15}												1.000	-0.288	0.314	-0.030	-0.010	0.013	0.131	0.244	-0.011
X_{16}													1.000	0.372	-0.258	0.078	0.191	0.292	0.047	0.564
X_{17}														1.000	-0.262	-0.199	0.280	0.529	0.245	0.537
X_{18}															1.000	0.076	0.240	-0.368	-0.136	-0.130
X_{19}																1.000	-0.058	-0.231	0.117	0.209
X_{21}																	1.000	0.095	-0.030	0.440
X_{22}																		1.000	0.082	0.308
D_5																			1.000	0.314
R_4																				1.000

Table 3-7

Summary of E_5 Regression Analysis
Based Upon Raw Data

	Variables				
	X_3	X_7	X8	X_{19}	Constant
Regression Equation for E_5	0.05699	0.16196	-0.01355	0.08361	-0.32493
Simple Correlation with E_5	0.085	0.313	-0.401	0.420	
Partial Correlation with E_5	0.3779	0.3206	-0.3669	0.3884	
Contribution Toward Variance*	0.0481	0.0678	0.1124	0.1768	
Multiple Correlation	0.6365				
Total Variance (Multiple R^2)	0.4051				

*The sum of this row equals the square of the multiple correlation.

Table 3-8

Summary of E_5 Regression Analysis
Based Upon Z Values

	Variables			
	X_2	X_{16}	X_{17}	Constant
Regression Equation for E_5	-0.73115	0.30243	0.44452	0.00000
Simple Correlation with E_5	-0.330	-0.098	0.171	
Partial Correlation with E_5	-0.5020	0.2554	0.4196	
Contribution Toward Variance*	0.1092	0.1290	0.0500	
Multiple Correlation	0.5369			
Total Variance (Multiple R^2)	0.2882			

*The sum of this row equals the square of the multiple correlation.

Table 3-9
Comparison of Coefficients of Separate Determination for Socioeconomic Variables Found to be Significant In Predicting Financial Effort E_5

	Coefficient of Separate Determination*					
	Based on Raw Data					Based on Z Values
Variable	Fla.	Ga.	Ky.	Ill.	Composite	Composite
X_2 (Per capita net effective buying income)	0.06N			0.21N		0.24N
X_3 (% ADA to total population)				0.57P	0.03P	
X_5 (State revenue receipts per pupil)			-0.06P			
X_7 (% of families with $10,000 income)	0.25P				0.10P	
X_8 (Non-while % of population)					0.12N	
X_{11} (Rural non-farm % of population)	0.19N		0.76P			
X_{16} (College educated adults % of population)						0.03N
X_{17} (Median family income)			-0.09N			0.08P
X_{19} (65 year olds % of population)		0.16N			0.15P	
X_{20} (ADA % of school age population)	0.11P					

*The P or N following the coefficient indicates a positive or negative simple correlation with dependent variable.

The regression equations for E_5 combining the data for the four states using either raw data or Z values explain less of the total variation in E_5 in three of the four states than when the data for each state are treated separately. The total explained variance from the combined data for E_5 using raw data was .4051 and Z values .2882 as compared with .61 for Florida, .16 for Georgia, .61 for Kentucky and .78 for Illinois.

It is interesting to note that there is considerable similarity in the independent variables appearing in the regression equations for the four states treated separately and when the data are combined. Table 3-9 shows that the independent variables X_3, X_7 and X_{19} contained in the regression equation for E_5 developed from the raw data combined for the four states also appear in at least one regression equation when the data for the four states are treated separately. This same table shows that independent variables X_2 and X_{17} contained in the regression equation for E_5 developed from the Z values of the combined scores, also appear in one or more of the regression equations developed when the data for each state are treated separately.

The Relationship of Socioeconomic Factors For 1960 to Average Financial Effort for 1959, 1960, 1961 (E_7). Tables 3-10 and 3-11 summarize regression analyses similar to those presented in the previous section, and they present even more forcefully the contrast between results obtained from using Z values as compared to those based upon raw data. The total variance explained by significant variables was only 0.2549 when using Z values, whereas the explained variance reached 0.7550 with raw data. If one accepts Guilford's conclusion that standard-score provide us with more comparable data than do raw-score scales, he will conclude that the

Table 3-10

Summary of E_7 Regression Analysis
Based Upon Raw Data

		Variables							
		X_2	X_3	X_{12}	X_{17}	X_{18}	X_{19}	X_{22}	Constant
Regression Equation for E_7		0.00099	0.10898	-0.02211	0.00025	-0.23203	0.11412	-0.00241	-1.77862
Simple Correlation with E_7		0.636	0.186	0.327	0.608	0.543	0.444	0.031	
Partial Correlation with E_7		0.3719	0.6257	-0.2014	0.2883	-0.2457	0.5827	-0.2329	
Contribution Toward Variance*		0.4042	0.1678	0.0105	0.0224	0.0145	0.1213	0.0142	
Multiple Correlation	0.8689								
Total Variance (Multiple R^2)	0.7550								

*The sum of this row equals R^2.

Table 3-11

Summary of E_7 Regression Analysis
Based Upon Z Values

		Variables				
		X_3	X_5	X_{19}	X_{22}	Constant
Regression Equation for E_7		0.34001	-0.36793	0.33905	0.24525	0.00000
Simple Correlation with E_7		0.019	-0.306	0.242	0.220	
Partial Correlation with E_7		0.3102	-0.3298	0.3420	0.2500	
Contribution Toward Variance*		0.0443	0.0938	0.0673	0.0495	
Multiple Correlation	0.5048					
Total Variance (Multiple R^2)	0.2549					

*The sum of this row equals R^2.

finding obtained by using Z values was more valid than the finding obtained by using raw scores.

The effect of reduction in overall deviation which was caused by standardization of data may be largely responsible for the difference in the numbers of significant variables with the two different types of data. Table 3-12 shows that the composite analysis of raw data produces seven significant independent variables as compared with only four with standard scores. Three of these are common to both regressions: X_3, ADA as a percent of total population; X_{19}, 65-year-olds as a percent of population; and X_{22}, percentage increase in population over the previous decade. The former two were each significant in only one of the separate state studies, Illinois and Florida, respectively. The latter was significant in none. On the other hand, X_5, state revenue receipts per pupil, was significant in two states--positively in Georgia and negatively in Illinois. It was found to be significant in the standardized data composite.

The regression equations for E_7 were recomputed for the combined data eliminating the use of the t test in the step-wise multiple regression program. When this was done the number of independent variables accepted in the regression equation was increased from 7 to include all 17 independent variables in the regression equations based on raw data but R^2 was increased from only .7550 with the t test to .7723 without it. The impact was greater for the regression equations based on Z values. When the t test was eliminated, the number of independent variables included was increased from 4 to 16 and R^2 was increased from .2549 to .3663.

For those faced with similar statistical problems it is suggested that where the retention of all variables accepted by the multiple correlation program is considered undesirable, that some method of determining significance be found which is superior to the t test, as applied

Table 3-12

Comparison of Coefficients of Separate Determination For Socioeconomic Variables Found To Be Significant In Predicting Financial Effort E_7

	Coefficient of Separate Determination*					
	Based on Raw Data				Based on Z Values	
Variable	Fla.	Ga.	Ky.	Ill.	Composite	Composite
X_2 (Per capita net effective buying income)					0.26P	
X_3 (% ADA to total population)				0.78P	0.08P	0.01P
X_5 (State revenue receipts per pupil)		0.36N		-0.10P		0.11N
X_{12} (% of 14-17 year olds attending school)			0.37P		0.04P	
X_{17} (Median family income)					0.18P	
X_{18} (% of married couples not owning homes)					0.09N	
X_{19} (65 year olds % of population)	0.32P				0.18P	0.08P
X_{22} (% population increase in last decade)					0.004N	0.05P

*The P or N following the coefficient indicates a positive or negative simple correlation with the dependent variable.

here. One possibility would be the rejection of variables which produce an increase in total variance of less than 0.01. This type of significance test would be extremely simple to apply from the computer printout which lists the independent variables in the order that they are accepted and shows the amount of contribution which each makes to total variance. One could determine at a glance the last acceptable step in the computation and could immediately identify the variables considered significant and the regression equation adopted as being the most significant. Furthermore, this approach would immediately inform the researcher of the amount of variance eliminated by the non-acceptance of all variables. When such a significant procedure was applied to the E_7 regression analysis for Z values, seven variables were rejected for contributing less than 0.01 to variance, a total loss of only 0.0202. The margin can be regulated by the amount of tolerance considered allowable, whereas the consistent application of the 0.05 level t test sometimes eliminates independent variables which would improve the equation for prediction purposes.

Comparison of Regression Equations for E_5 and E_7. Table 3-13 presents a comparison of the regression equations for E_5 and E_7 based on both raw data and Z values. The symbol E_5 is the measure of average local financial effort for the years 1949, 1950 and 1951 and E_7 is the average effort for the years 1959, 1960 and 1961. If there is a combination of socioeconomic variables that substantially affect local school fiscal policy with respect to effort, through time, then substantially the same socioeconomic variables should appear in the E_5 and E_7 regression equations based on raw data and the regression equations for E_5 and E_7 based on Z values should contain substantially the same independent variables. Table 3-13 shows that the regression equation for E_5 based on raw data contains four independent variables and the equation for E_7 seven variables only two of which, X_3 and

X_{19} are included in each equation. The regression equation for E_5 based on Z values contains three variables and the equation for E_7, four variables none of which is contained in both equations. As pointed out above, the project staff considers the regression equations based on Z values for the combined scores to be more valid than those based on raw scores. The evidence based on the combined scores shows clearly that through time there was no combination of particular socioeconomic variables that had a determinative effect on local effort. Therefore, the evidence obtained from combining the data for the four states corroborated the conclusion reached concerning the relationship between socioeconomic variables and local effort by analyzing the data for each state separately.

Relationship of Socioeconomic Factors to Local Elasticity of Demand for Education

Regression equations based on raw scores and also Z values were computed for two periods of time, 1946 to 1955 (D_3) and 1954 to 1963 (D_5) and compared. The results are presented in the following paragraphs.

Relationship of Socioeconomic Factors for 1950 to D_3. Table 3-14 shows the regression analysis for D_3 based on raw scores and Table 3-15 the analysis based on Z values. It is interesting to note that the variable X_2 (per capita net effective buying income) appeared in both equations. The multiple correlations developed from raw scores and from Z values were both so low as to be considered nonsignificant because they explained only 4 to 5 percent of the total variance.

Table 3-13

Comparison of Regression Equations for E_5 and E_7
(Data Combined for Four States)

	Regression Equations Based on Raw Scores		Regression Equations Based on Z Values	
Socioeconomic Variables	E_5	E_7	E_5	E_7
X_2 (Per capita net effective buying income)		.00099	-.73115	
X_3 (% ADA is of total population)	.50699	.10898		.34001
X_5 (State revenue receipts per pupil)				-.36793
X_7 (% of families with $10,000 income or more)	.16196			
X_8 (% of population that is non-white)	-.01355			
X_{12} (% of 14-17 year olds attending public or private schools)		-.02211		
X_{16} (% of population 25 years old and more that are college graduates)			.30243	
X_{17} (Median family income)		.00025	.44452	
X_{18} (% of married couples not owning homes)		-.23203		
X_{19} (% of population 65 years old and more)	.08361	.11412		.33905
X_{22} (% of population increase over past decade)		-.00241		.24525
Constant Term	-.32493	-1.77862	.00000	.00000
Multiple Correlation	.6365	.8689	.5369	.5048

Table 3-14

Summary of D_3 Regression Analysis
Based Upon Raw Data

		Variables	
		X_2	Constant
Regression Equation for D_3		0.00036	0.35062
Simple Correlation with D_3		0.099	
Partial Correlation with D_3		0.0990	
Contribution Toward Variance		0.0497	
Multiple Correlation	0.2230		
Total Variance	0.0497		

Table 3-15

Summary of D_3 Regression Analysis
Based Upon Z Values

		Variables	
		X_2	Constant
Regression Equation for D_3		0.20844	0.00000
Simple Correlation with D_3		0.208	
Partial Correlation with D_3		0.2080	
Contribution Toward Variance		0.0434	
Multiple Correlation	0.2084		
Total Variance	0.0434		

Table 3-16

Summary of D_5 Regression Analysis
Based Upon Raw Data

		Variables			
		X_{14}	X_{15}	X_{22}	Constant
Regression Equation for D_5		0.02336	0.01564	0.00296	-0.14608
Simple Correlation with D_5		0.330	0.294	0.030	
Partial Correlation with D_5		0.2229	0.2523	0.2133	
Contribution Toward Variance		0.1089	0.0377	0.0390	
Multiple Correlation	0.4308				
Total Variance	0.1856				

Relationship of Socioeconomic Variables for 1960 to D_5. Table 3-16 shows the regression analysis for D_5 based on raw scores and Table 3-17 the analysis based on Z values. It will be noted that no variable occurs in both equations. The multiple correlations are somewhat higher than for D_3 but both equations leave more than 80 percent of the variation in the dependent variable unexplained.

Table 3-17

Summary of D_5 Regression Analysis
Based Upon Z Values

		Variables		
		X_5	X_8	Constant
Regression Equation for D_5		-0.26978	-0.27115	0.00000
Simple Correlation with D_5		-0.285	-0.287	
Partial Correlation with D_5		-0.2806	-0.2826	
Contribution Toward Variance		0.0725	0.0822	
Multiple Correlation	0.3934			
Total Variance	0.1548			

Comparison of Regression Equations for D_3 and D_5. If there is a combination of socioeconomic variables that have a determinative effect on local elasticity of demand for education, then the equations for D_3 and D_5 based on raw scores should contain substantially the same independent variables and the equations for D_3 and D_5 based on Z values should also contain similar independent variables. However Table 3-18 shows that none of the independent variables in the regression equations for D_3 and D_5 based on raw scores appears in both equations. The same is true for the independent variables in the regression equations for D_3 and D_5 based

Table 3-18

Comparison of Regression Equations for D_3 and D_5
(Data Combined for Four States)

	Regression Equations Based on Raw Scores		Regression Equations Based on Z Values	
	D_3	D_5	D_3	D_5
X_2 (Per capita net effective buying income)	.00036		.20844	
X_5 (State revenue receipts per pupil)				-.26978
X_8 (% of population that is non-white)				-.27115
X_{14} (% of 14 year old or more females in labor force)		.02336		
X_{15} (% of employed persons engaged in manufacturing)		.01564		
X_{22} (% of increase in population over the past decade)		.00296		
Constant Term	.35062	-.14608	.00000	.00000
Multiple Correlation	.2230	.4308	.2084	.3934

on Z values. Therefore the evidence obtained from combining the data for four states does not show any combination of socioeconomic variables that through time has a determinative effect on local elasticity of demand for education. The same conclusion was reached when the data for the four states were analyzed separately.

Relationship of Socioeconomic Factors to Local School Revenue Receipts per Pupil

The relationship between socioeconomic factors for 1960 and local revenue receipts per pupil in 1960 (R_4) was analyzed for the data for the four states combined. Table 3-19 presents an analysis for the regression

Table 3-19

Summary of R_4 Regression Analysis
Based Upon Raw Data

	Variables						
	X_2	X_7	X_8	X_{16}	X_{19}	X_{22}	Constant
Regression equation for R_4	0.15936	5.01071	-1.15323	4.67199	9.23362	-0.38505	-219.64525
Simple Correlation with R_4	0.847	0.749	-0.333	0.637	0.418	-0.016	
Partial Correlation with R_4	0.5045	0.2027	-0.2609	0.2309	0.5073	-0.3423	
Contribution Toward Variance	0.7177	0.0153	0.0110	0.0097	0.0564	0.0198	

Multiple Correlation	0.9110
Total Variance	0.8299

Table 3-20

Summary of R_4 Regression Analysis Based Upon Z Values

	Variables							
	X_2	X_3	X_5	X_{13}	X_{16}	X_{17}	X_{19}	Constant
Regression Equation for R_4	0.36581	-0.17666	-0.30381	-0.22257	0.25512	0.14079	0.12155	0.00000
Simple Correlation with R_4	0.763	-0.639	-0.730	0.492	0.564	0.537	0.209	
Partial Correlation with R_4	0.5462	0.4604	-0.4693	-0.2095	0.3549	0.0985	0.4237	
Contribution Toward Variance	0.5819	0.0129	0.0407	0.0110	0.0165	0.0093	0.0767	
Multiple Correlation	0.8654							
Total Variance	0.7489							

Table 3-21

The Regression Equations for R_4
Based on Raw Data and Z Values Compared

Significant Socioeconomic Variables	Raw Data*	Z Values*
X_2 (Per capita net effective buying income)	71.71% P	58.19% P
X_3 (Percent ADA to total population)		1.29 N
X_5 (State revenue receipts per pupil)		4.07 N
X_7 (Percent of families with $10,000 income)	1.53 P	
X_8 (Non-white percent of population)	1.10 N	
X_{13} (Median school years completed by adults)		1.10 P
X_{16} (College educated adults, percent of population)	0.97 P	1.65 P
X_{17} (Median family income)		0.93 P
X_{19} (Percent of population 65-or-more-years-old)	5.64 P	7.67 P
X_{22} (Percent population increase in last decade)	1.98 N	
Total Variance (R^2)	82.99	74.89

*P and N designate the sign of the simple correlation of the socioeconomic variable with R_4.

equation of R_4 based on raw scores and Table 3-20 an analysis based on Z values. In Table 3-21 these two equations are compared. It is noted from this table that the variable X_2 (per capita net effective buying income) explains most of the variance in R_4 in both of the equations. It is interesting also to note that the variables X_{16} (the percent of the total population that are college educated adults) and X_{19} (percent of population that are 65 or more years old) appear in both equations but the contribution of X_{16} to total variance in both equations is very small.

The evidence obtained from combining the data for the four states confirms the conclusions reached concerning the relationship of per capita income by analyzing the data separately for each state. Measures of per capita income or similar variables explain far more of the variation in local revenue receipts per pupil than all other socioeconomic variables examined combined.

Summary

Following is a brief summary of conclusions reached concerning the hypotheses tested in Chapters 2 and 3.

1. Hypothesis 1. Most of the districts selected for study have followed relatively consistent patterns of financial effort and elasticity of demand over a period of years.

The part of this hypothesis dealing with financial effort was confirmed when the data for each state were analyzed separately and also when the data for the four states were combined. Most high effort districts continued to be high effort districts throughout the 18 years studied. The same thing was true of median effort and low effort districts.

However, there were a number of districts that made a radical change from low effort to high effort. Case studies were made of seven of these districts in order to identify the factors in the districts that affected the change in fiscal policy. Different factors were found to have been associated with changes in fiscal policy. In four of the seven districts, the leadership of the superintendent of schools was identified as an important factor. The influence of businessmen either acting formally or through organizations was significant in six of the seven districts. Changes in the school board, community awareness of school conditions, inputs of new industry and new population were other factors in one or more districts. Data were not sufficient to draw any general conclusion concerning the factors that bring about significant changes in school fiscal policy in a district. It is perhaps best to conceptualize local changes in school fiscal policy as the result of the interaction of a considerable number of variables (which vary with the district) some of which are inputs and some of which are outputs of the school social system which is itself only a subsystem of our total social system.

The second part of this hypothesis which deals with consistency of elasticity of demand was not confirmed by analyses of the data for each state separately or when the data were combined. There seemed to be no relationship of the coefficients of elasticity of demand of the districts during one period of time to their coefficients during a subsequent period of time.

2. Hypothesis 2 (a). Local school financial effort is related to socioeconomic factors.

This hypothesis was not confirmed through time either by analyses of the data for each state treated separately or when the data were combined. It is true that regression equations were developed containing independent variables which statistically explained most of the variance in local effort at one point of time. But when the regression equations were computed for different periods of time, entirely new variables appeared and practically all of the variables in the first regression equations disappeared. The evidence did not justify the conclusion that any combination of the socioeconomic variables had a significant relationship through time to local financial effort. This study demonstrated the danger of drawing conclusions concerning the contributions of independent variables to a dependent variable when the regression equation is computed for only one point in time.

3. Hypothesis 2 (b). Local elasticity of demand for education is related to socioeconomic variables.

This hypothesis was not confirmed by analyses of the data for each state separately or by combining the data. No relationship through time between the socioeconomic variables studied and elasticity of demand was found.

4. Hypothesis 2 (c). Local revenue receipts per pupil are related to socioeconomic variables.

This hypothesis was confirmed by the analyses of the data for each state treated separately and when the data were combined. Of the variables studied, per capita net effective buying income explained far more of the variance in local revenue receipts per pupil than all other variables combined. This finding corresponds to the finding of numerous other studies that some measure of wealth or income explains most of the variation among local school districts in the amount of local revenue per pupil.

CHAPTER 4

THE RELATIONSHIP OF TYPOLOGY OF POWER STRUCTURE AND EDUCATIONAL LEADERSHIP TO FINANCIAL EFFORT

In Chapter 2 and Chapter 3 the relationship between socioeconomic factors and local school financial effort in 122 school districts in four states was analyzed. The research staff anticipated that the socioeconomic factors would account for only part of the observed variation in financial effort among the school districts. Consequently, the project was designed to investigate the impact of numerous behavioral factors upon school fiscal policies. To accomplish this, the staff selected twenty-four school districts for intensive investigation.

One purpose of this chapter is to discuss the findings concerning the power structures found among the twenty-four districts and the relationship of these structures to the local financial effort among the districts. In hypothesis 4 listed in Chapter 1, the staff stipulated that, "The power structures in low financial effort school districts are more monopolistic than the power structures of high effort districts". Another purpose of this chapter is to analyze possible relationships between the operational characteristics of the school board and leadership of the school superintendent to local fiscal policy.

Procedures

The school districts studied were selected on the basis of financial effort with attention to population size in the selection. Three of the highest financial effort and three of the lowest financial effort school districts of small, medium, and large population were selected in each of the four states. Thus an attempt was made to account for the factor of size in selecting high effort and low effort districts. The size factor was considered in the selection so as not to compromise the aim to obtain districts with wide differences in local financial effort for education. In some cases wide variation in population size was not possible.

An intensive study of the power structure and decision-making process was accomplished in each of the twenty-four selected districts. Massive amounts of data were obtained to describe in each school district the typology of the power structure, characteristics of the community influentials, process of decision-making, power groups, effectiveness of educational leadership, civic and educational beliefs of leaders and others, and other information about the political and social systems in which the schools functioned.

The technique used to study the power structures employed adaptations of the reputational and decision analysis approaches. Interview Guide A (See Appendix A) was administered to knowledgeable persons representative of major institutional-interest sectors of the community. Although this varied some by type of community, the sectors and representatives of sectors outlined in Table 4-1 on the following page were typical.

Although the same basic procedures were used in all communities, the technique was adjusted slightly to compensate for unique conditions among the school districts. For instance, if sizable Catholic and Protestant groups were in the district, both a Catholic and a Protestant minister were interviewed. Some of the districts did not have a large Negro population which necessitated special consideration in initial interviews.

The persons interviewed initially with Interview Guide A were asked three basic questions: What are the most important issues, problems, or projects of general concern that have been resolved within the past several the aim to obtain districts with wide differences in local financial effort for education. In some cases wide variation in population size was not possible.

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The persons interviewed initially with Interview Guide A were asked three basic questions: What are the most important issues, problems, or projects of general concern that have been resolved within the past several

Table 4-1

Guide to Initial Interviews in Districts

Interest Sectors	Probable Representatives of Interest
1. Farm	Farm agent, or highly respected farmer
2. General Business	President of Chamber of Commerce, or a prominently mentioned member of Chamber of Commerce
3. Education	Superintendent of schools, chairman of the board of education, or a prominently mentioned board member
4. General Government	Well-known politician holding an elective office
5. Law	Prominent attorney
6. Health	Prominent physician, or the public health physician
7. Banking and Finance	The chairman of the board of directors or the president of the largest and most influential bank in the district
8. Women's Groups	President of the Women's Club or some person known to be important in Women's Club activities
9. Labor	Active leader in a local labor union (i.e., steward)
10. Negro sub-culture	Prominent Negro businessman, minister or physician
11. Religion	Highly respected clergymen
12. Partisan politics	Chairman of executive committees of the Democratic Party and the Republican Party
13. News Media	Newspaper editor, manager of television or radio station

years, or may have to be decided in the near future? What persons had the most influence or leadership on such issues mentioned regardless of whether you agree with them? In your opinion, what are the most important organizations in this community?

The results of these interviews were combined and analyzed. The frequency of naming issues, problems, projects, persons, and organizations were tabulated. A 10 percent random sample of all persons named less than three times was selected for further interviews with Interview Guide A. If the results of these interviews were similar in pattern to the first interviews, all persons named three or more times were included in follow up interviews with Interview Guide B (See Appendix B).

Interview Guide B was assembled from the information obtained from the initial interviews with Interview Guide A. For instance, the organizations named frequently in the initial interviews were listed in Interview Guide B. Issues and decisions listed for analysis were those frequently mentioned and selected to represent different issue areas (i.e., education, health, politics, highways, etc.). Those persons named three or more times were listed alphabetically and all of them were interviewed. Thus Interview Guide B was constructed specifically for each school district. Its use resulted in the accumulation of much data about the exercise of power in decision-making.

The data from the interview guides were used for a case analysis for each school district. The activity and interaction patterns among the leaders in decision-making on problems, projects, and issues were analyzed. Sociometric procedures were employed. Business and friendship ties were noted. Verbal comments from the many persons interviewed were used to describe the shape and behavior of the power structure.

Considerable attention was focused upon appropriate measures of relative power among the leaders in each school district. Following were some factors studied by Marsh[1].

X_1 = Reputation: Leaders rating of each other on a five point scale;

X_2 = Decisional: Estimate of power of leaders in selected issues and decisions;

X_3 = Support-opposition: Leaders ratings of who would support or oppose them on projects and issues;

X_4 = Reputation: Number of times leader was named in Interview Guide A;

X_5 = "Verstehen": The overall subjective ranking by person conducting interviews in the school districts;

X_6 = State influence: The ability of each leader to obtain aid for the community through state sources.

Theoretically, a person's total power might be measured by the formula:

$$Y = A_1X_1 + A_2X_2 + A_3X_3 + A_4X_4 + A_5X_5 + A_6X_6$$

Marsh investigated the extent of agreement and intercorrelation among these six factors for the school districts of Florida. By using Kendall's coefficient of concordance (W) he found agreements in most instances significant at the .05 level as shown below.

	School Districts					
Factor Ranks	1	2	3	4	5	6
X_1 through X_3	.706*	.575*	.582*	.313	.659*	.534*
X_1 through X_6	.676*	.544*	.579*	.607*	.684*	.531

*Significant at .05 level.

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[1] William F. Marsh, Characteristics of the Power Structures of Six Florida School Districts Selected on the Basis of Population, Educational Effort, and Elasticity of Demand for Education, (Doctoral dissertation, University of Florida, 1965).

After thorough consideration of the factors the research staff decided that factors X_1, X_2 and X_3 would be used in all studies. The measures were representative of both reputational and decision analysis data. Some of the other measures, especially X_5, were too subjective. Since there was significant agreement among all factors tested, the use of only three measures simplified the research.

Much personal data about each leader were recorded (See Interview Guide B). Questions were also included to record information about the board of education and the leadership patterns of the superintendent of schools.

The case study included analyses of the interaction patterns among leaders. All significant power groups identified as important in decision-making were described. The behavior of leaders in the issues, projects, and problems was analyzed. The voting patterns of people were studied in each district to determine the percentage registered to vote and the percentage actually voting in the last primary and general elections. Documentary evidence such as local newspapers was used in the investigations. The findings reported in this chapter were largely abstracted from the following numbered doctoral dissertations listed in Appendix H: 5, 10, 13, 14, 16, 17, 20.

Typology of Power

Studies previously undertaken at the University of Florida revealed that different kinds of power structures existed among school districts. Nevertheless, the large number of power structure studies undertaken in this project necessitated attention to the development of possible typologies. This was undertaken in the analysis of the six Florida school districts compiled in a study by Marsh[2]. The research of other scholars was used to state power structure types. The description of power structure types of necessity demands attention to criteria for the location of school district structures within given typologies.

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[2] Ibid.

The criteria for four typologies of power structure used in the project are shown in Table 4-2. The reader will note that the typologies are expressed in terms of criteria dealing with: (1) structure of the power groups or factions, (2) leadership overlap on different kinds of issues, (3) degree of competition on decisions, (4) competitiveness of groups, (5) communication structure, (6) participation of citizens by voting and in interest groups, (7) the kinds of issues existing in the school district.

Experiences with the use of these criteria indicated that the power structures did not always fit neatly into one category. For example, the measure of citizen participation by voting was not entirely successful in that some districts which best fit most criteria for a segmented pluralism had a lower percent of persons voting than some districts best described as monopolistic elites. In fact, voting is probably not a good measure of democratic citizen participation in decision-making in local government. For this reason, the staff undertook studies of citizen participation in decisions which are reported in Chapter 7.

The monopolistic elite structure is briefly defined as a structure in which a person or group of persons exercise a dominant, not absolutely complete, power over major public policies in the school district. Opposition to the structure is sporadic and seldom survives more than two sucessive public elections. Regime conflicts are not characteristic of the structure. This is a system with a high degree of closedness.

The multigroup noncompetitive structure is best illustrated by the rural school district with several small towns and villages. Each

Table 4-2

Criteria For Power Structure Continuum

Monopolistic elite	Multigroup noncompetitive	Competitive elite	Segmented pluralism
Singular structure	Considerable overlapping of structural groups	Limited overlapping of groups	Segmented structure
80-100% overlap on projects	70-80% overlap on issues	50-70% overlap on issues	50% or less overlap on issues
Issues contained	Minor issue competition	Competitive on issues	Segmented or specialized competition on issues
One dominant group over period of more than one election	Incomplete separation of two or more groups; consensus at times	Two or more well-defined power groups over time	Many competing groups separated due to different interests
Communication line upward and downward within group	Communication between groups allows consensus on major issues	Communication is with satellites; little with competing groups	Communication through political office-holders; little otherwise
Voting participation is low; 40-50% or less of registered voters	Voting participation approximates 55% over time	Voting participation approximates 60% over time	Voting participation approximates 65% or higher over time
Membership in groups is general	Much overlap in membership between two or more competing groups	Overlap in membership between groups	Little overlap in group membership
Few, if any, regime conflicts	Little regime conflict	Regime conflicts between two or more groups	Regime conflicts involving many groups

of these towns has a power structure. The leaders in these power structures, taken collectively, have a high degree of consensus concerning general public policy. For example, most of them may hold a very conservative concept and believe in a traditional school program. Because of the high degree of consensus (i.e., provincial ideas) the system is characterized by much closedness.

The competitive elite structure is characterized by system openness. Two or more power groups are involved in regime-like conflicts concerning all areas of community living. There is a high degree of leader overlap in decisions in different issue areas as opposed to low overlap in a segmented pluralism. Bitterly fought issues concerning "the kind of town ours shall be" typify the competitive elite structure. Citizen participation is not as great or effective in the competitive structure as is thought to be true of a segmented pluralism.

The pluralistic structure (segmented pluralism) has a high degree of openness to emergence of leadership in the structure. Leadership interests tend to be specialized. Leaders who are interested in one area of community living (i.e., education) are not likely to be involved in other areas (i.e., planning and zoning, health, recreation). The organized interest groups are viable sources of power in decisions. This structure is thought to be more consistent with democratic theories of government than those fitting other typologies.

Each of the twenty-four school district power structures was placed on the power structure continuum at the point of best fit and the degree of agreement with the criteria noted. In the placement of the six Florida school districts the identification of power structure on the continuum agreed with the criteria stated for these placements with 87.5 percent success. The agreement of placement with the criteria was above 80 percent for the Kentucky and Georgia districts. Illinois districts ranged from 70 to 75 percent successful fit.

These findings are significant. The difficulty of designing a classification scheme which accommodates all power structures everywhere was evident. The power structures for school districts are unique systems. Consequently, no two monopolistic elite power structures are exactly alike with regard to any comprehensive set of criteria one might employ. The staff was also well aware of the extreme difficulty of measuring precisely the different elements of a power system suggested by the criteria. Nevertheless, this study demonstrated that different typologies of community power systems exist. For example, disregarding for the moment the four typologies of power structure, the power structures can be classified into two basic classifications: noncompetitive and the competitive types. In fact, the staff made use of these two basic classifications in a number of statistical procedures.

Using systems terminology, the competitive elite and multigroup noncompetitive structures manifest a high degree of closedness. The competitive elite and segmented pluralism structures are marked by openness.

Power Systems Found Among the Selected Districts

The classifications of the power systems for the twenty-four districts in the study are shown in Table 4-3. This table also shows the population of the districts, states in which the districts are located, and whether the districts are high financial effort (H) or low financial effort (L) districts. All names of the districts are fictitious.

The distribution of the power structure typologies among the selected districts is shown in Table 4-4. The multigroup noncompetitive structure was found more often. This structure is characterized by a high degree

Table 4-3

Classification of Power Structures

District	Effort	Population	Type of Structure	State
McKinley	H	228,106	Segmented pluralism	Florida
Everest	H	76,895	Competitive elite	Florida
Logan	H	54,539	Competitive elite	Florida
Whitney	L	455,411	Monopolistic	Florida
Ranier	L	67,131	Multigroup noncompetitive	Florida
Shasta	L	36,208	Multigroup noncompetitive	Florida
Andrews	H	234,757	Competitive elite	Georgia
Ford	H	46,365	Multigroup noncompetitive	Georgia
Scott	H	23,632	Monopolistic	Georgia
Anderson	L	39,154	Segmented pluralism	Georgia
Benne	L	30,652	Monopolistic	Georgia
Carter	L	20,596	Competitive elite	Georgia
Oak	H	209,138	Segmented pluralism	Kentucky
Pine	H	69,096	Competitive elite	Kentucky
Cedar	H	42,471	Monopolistic	Kentucky
Hub	L	58,148	Multigroup noncompetitive	Kentucky
Farm	L	37,439	Multigroup noncompetitive	Kentucky
Scenic	L	22,050	Monopolistic	Kentucky
Allwin	H	78,000	Monopolistic	Illinois
Brookston	H	49,450	Multigroup noncompetitive	Illinois
Camelot	H	26,630	Competitive elite	Illinois
Marleboro	L	83,270	Multigroup noncompetitive	Illinois
Tareyton	L	51,860	Multigroup noncompetitive	Illinois
Winston	L	36,271	Multigroup noncompetitive	Illinois

Table 4-4

Distribution of Power System Typologies
Among Selected Districts

	Segmented Pluralism	Competitive Elite	Multigroup Noncompetitive	Monopolistic Elite
High Effort	2	5	2	3
Low Effort	1	1	7	3
Total	3	6	9	6
Percent All Districts (4 categories)	12.5	25.0	37.5	25.0

of political consensus and lack of regime-like issues. The structure is essentially noncompetitive and characterized by greater closedness than openness. The monopolistic type structure accounted for one-fourth of the districts as was also true of the competitive elite structure.

As suggested earlier, two basic classifications of the power structures were used: competitive and noncompetitive. The monopolistic elite and multigroup noncompetitive structures were classified as noncompetitive structures with a high degree of system closedness. The competitive elite and segmented pluralism structures were classified as competitive and are characterized by openness. Using this classification fifteen of the power structures were noncompetitive (closed) and nine were competitive (open). Table 4-5 shows the two-category classification of the districts according to local financial effort.

Of the twenty-four districts investigated 62.5 percent were noncompetitive and 37.5 percent were competitive. Thus the selected districts had structural characteristics that tended toward greater closedness than openness.

Table 4-5

Distribution of Competitive and Noncompetitive Structures by High and Low Effort

Effort	Noncompetitive	Competitive
High Effort	5	7
Low Effort	10	2
Total	15	9
Percent of Total	62.5	37.5

Relationship of Power Structure Typology to Local Financial Effort

In this project the staff hypothesized (See hypothesis 4 of Chapter 1) that the power structures of low financial effort districts would be more monopolistic than the power structures of high financial effort districts. The distribution of the school districts by high and low effort and by competitive and noncompetitive power structures is shown in the contingency table below.

Structure	Effort	
	High	Low
Competitive	7	2
Noncompetitive	5	10

Discher's Exact Probability Test was applied to estimate whether the above distribution had occurred by chance. The established level of significance was .05 which indicated a probable relationship between financial effort and power structure typology. Ten of the twelve low financial effort district power structures were noncompetitive, whereas seven of the high financial effort structures were classified as competitive. These data support hypothesis 4 as stated earlier that low effort district power structures are more monopolistic than high effort districts. Another way of stating the hypothesis would be that the power structures of low effort districts tend toward greater system closure than the structures of high effort districts.

Nevertheless, the data also suggest that further study is needed to determine greater statistical exactness of the probable relationship between financial effort and power system typology. In Table 4-3 one notes that three of the high effort districts had steeply peaked monopolistic power systems. Thus the structure typology may be one of several interacting factors associated with effort. For example, the leaders of a monopolistic power system may hold very liberal beliefs as a basis of their behavior in supporting school budgets. In such a system the influence of closure evidenced in the very structure of power would be counterbalanced by the liberal beliefs of the leaders in the structure. However, this study supports the idea that schools progress more in financial support within political systems characterized by greater openness than closedness.

Characteristics of the Board of Education and Superintendents

Considerable data were obtained about the operation and organization of the board and about the school superintendents of the selected districts. The staff was interested in the patterns of tenure of members of the boards of education, tenure of the school superintendents, formal education of the superintendents, whether a viable teachers organization existed in the districts, fiscal dependence of board, and other operational information. The data collected are reflected in the questionnaire shown in Appendix C.

Most of the school boards of the selected school districts were fiscally independent. Only three of the boards reported a fiscally dependent relationship. Fiscal dependence was not a significant factor in the extent of local financial effort among the districts.

There was no statistically significant difference between the tenure of school board members between the high effort and low effort districts. As indicated in Chapter 7 the tenure of board members was related to the typology of the power structure.

The tenure of school superintendents among the selected districts was analyzed over a twenty year period. The mean number of superintendents was 3.18 for high effort districts and 2.25 in low effort districts. Completion of the t test indicated that this difference was statistically significant at the .01 level.

The school superintendents of high effort districts had more years of formal education than the superintendents of low effort districts. The mean years of graduate school education was 2.67 years for the superintendents of high effort districts and 1.58 years for superintendents of low effort districts. This difference was statistically significant at the .005 level.

Educational Leadership

In the interviews with community influentials and other persons they were asked several questions about the board of education and school superintendent.

The research staff investigated certain leadership and interaction patterns of school superintendents, boards of education, and community influentials. Hypothesis 5 of Chapter 1 was stated as follows: "School administrators of high financial effort districts will demonstrate greater status and power in the political power structure activities than the educational leaders in the low effort districts." The staff was also interested in several specific questions which are not stated in this hypothesis. Are the interaction patterns of the school superintendents and leaders of the power system of high and low effort districts different? Do the school superintendents of high effort districts tend to become involved in nonschool issues more often than their counterparts in low effort districts? Is there a difference between high and low effort districts in the way leaders in the power structure are involved in educational decision-making?

In order to investigate such questions as these, the research staff established procedures for investigating (1) the status and power of the school superintendents, (2) interaction patterns between school superintendents and power system on community issues, (3) the involvement of the superintendents and influentials in activities (i.e., membership in organizations) which enhanced increased interaction among them. The basic data for the investigation is illustrated in Table 4-6. Another analysis involved the categorization of the superintendents leadership styles as (1) passive, (2) participative, and (3) interactive. The criteria for the placement of superintendents in these categories are outlined in Table 4-7.

Power and Status of School Superintendents

There was no statistically significant difference in the power and status of school superintendents in high effort and low effort school districts. The likelihood that this would be true appeared early in the study when data showed the superintendents of several low effort districts to be very powerful leaders. In one low effort district in Kentucky, the school superintendent was found to be the "political boss" of all governmental services in the county district.

Table 4-6

Sources of Information for Power and Interaction Patterns

General Components	Established Criteria	Data Utilized in Assignments of Ratings	
Status and power	Community influence	Community power systems Influential's ratings Interest area nominations	Historical data (as relevant)
	Political power	Community power system Political support/opposition Political activities	Extent of state influence Descriptive statements
	Perceived leadership	Rating by judges	
Recognized Interactions	School related issues	Community power system Influentials involved in recognized issues Extent of solicited advice	Analysis of superintendent's role in educational issues from influential and superintendent's statements
	Nonschool related issues	Community power system Extent of superintendent's involvement in issues Influential's report of superintendent's involvement	Superintendent's statements Historical data
Potential avenues for interactions	School related activities	Community power system Kinds of activities Relative number of influentials involved	Statements by superintendents and influentials Historical data
	Nonschool related	Superintendent's organizational memberships Influential's organizational memberships Economic activity of the superintendent other than organizational Reported "friendship" ties Length of residence of the superintendent Informal relationships	

Table 4-7

Leadership Patterns of Superintendents by Categories

Criteria	Passive	Participative	Interactive
Relative degree of community influence	Little influence in community affairs	Moderate influence in community affairs	High degree of influence in community affairs
Political influence in community	Low community political influence	Moderate community political influence	High community political influence
Perceptions of members of power system	Seen as weak leader by members of the power system	Seen as leader of school system; considered predominantly as a specialist by power system members	Seen as leader of schools with community wide influence by power system members
Interaction on school issues	Low involvement of community influential in school related issues. Seeks little or no advice from community influentials	Moderate involvement of influentials in school related issues. Seeks advice on specific issues	High involvement of influentials in school related issues. Attempts to influence community leaders on school issues
Interaction on issues not directly related to schools	Little or no issue interaction with community influentials	Moderate degree of interaction on a variety of issues; does not instigate issues	Assumes leadership in nonschool issues; instigates nonschool issues
Involvement of community leaders in school related activities	Low involvement of community leaders in school related activities	Moderate involvement of community influentials in school related activities	High involvement of community influentials in school related affairs
Socioeconomic interaction with community influentials	Little socioeconomic interaction with community influentials	Moderate membership in civic and social organizations similar to influentials membership patterns; few economic ties in community	High membership in civic and social groups to which influentials belong; economic interest in community

This finding raises questions concerning the possible significance of values for those engaged in education and for educational administrators in particular. The question may not be just how much power the superintendent has but also what he uses his power to achieve. Perhaps some of the superintendents in the selected districts used their power to support very conservative financial policies. Some may have simply used their influence to uphold the conservatism evident in their districts. Possibly they were primarily interested in self preservation, however this is conjecture and not based on empirical investigation. Earlier we reported that the superintendents of low effort districts had longer tenure than the superintendents of high effort districts. This could indicate more agreement on values between the school superintendents and power structure leaders of low effort districts. Thus one implication of the finding is to investigate the goals that school superintendents and other educators seek to achieve with their power.

On the other hand the implication might be that school fiscal policies are a result of the interaction of power system variables too complex for one educational leader to control or influence. This alternative explanation does not appear to be acceptable in terms of other findings reported below and elsewhere in this report. Another conjectural explanation might be that educators among the selected low effort districts did not employ good leadership strategies. Perhaps they did not combine effective planning with viable political strategies to influence fiscal policies of their districts. From some of the analyses of interaction patterns discussed below, this would appear to be a logical hypothesis to be tested in studies to follow.

Interaction Patterns of School Superintendents

The difference between the high effort and low effort districts in the placement of school superintendents into passive, participative, and interactive leadership style categories (See Table 4-5 for Criteria) was not statistically significant. However, this overall categorical placement may be too global to manifest sensitivity to differences. That is, the analysis may not have been appropriate for purposes of this study. For example, the following paragraphs will show some interesting findings when differences between specific criteria measures were analyzed.

The superintendents of schools of high effort districts demonstrated more active participation in school related issues than the superintendents of low effort school systems. Ratings of the active participation of school superintendents in school related issues produced an average rating of 3.50 for high effort districts and 2.91 for low effort districts. The t test indicated that the difference was significant at the .01 level.

The data also demonstrated that the superintendents of high effort school districts exhibited a tendency toward greater involvement in non-school related issues. The difference in the mean ratings of 3.17 for high effort and 2.25 for low effort districts was significant at the .01 level.

Questions have often been asked concerning whether schoolmen should seek to involve top influentials of the power structure in educational decision-making. Many schoolmen feel that too much leadership involvement may be detrimental to educational progress. In this study the involvement patterns of power structure leaders in educational decisions were investigated.

There was greater involvement of community influentials in the school related activities of high effort school districts than in low effort districts. These data also reflect more frequent interaction between school superintendents and community influentials of high effort districts. The extent of involvement mean score was 3.08 for high effort districts and 2.00 for low effort districts. The t test estimated the difference at the .025 level. While causation cannot be assumed from these data, the finding does support the thesis of numerous educators concerning the importance of involving community leaders in school activities and decisions. These data have implications for the strategies for change employed by schoolmen.

Summary

The power structures among the twenty-four school districts investigated were categorized into four typologies including (1) monopolistic elite, (2) multigroup noncompetitive, (3) competitive elite, and (4) segmented pluralism. The monopolistic and multigroup noncompetitive structures are characteristically noncompetitive while the competitive elite and segmented pluralism types are basically competitive. Consequently, in many of the analyses the two basic classifications, competitive and noncompetitive, were used. Fifteen of the school districts had noncompetitive type power structures in which six were monopolistic elite and nine were multigroup noncompetitive. Nine of the school districts had competitive type power structures in which six were placed in the competitive elite category and three were segmented pluralisms.

Hypothesis 4 of chapter 1 stating that the low financial effort districts would be more monopolistic than high effort districts, was supported by the data. The data showed that the low effort school districts tended to have noncompetitive type power structures, whereas the power structures of high effort districts tended to be of a competitive type. The configuration observed was statistically significant at the .05 level. Another way of stating the finding is that the power systems of high financial effort districts had a higher degree of openness than the power systems of low effort districts.

Analysis of the structural operation of the boards of education (i.e., fiscal dependence or independence) by high and low financial effort categories produced no statistically significant differences. The tenure of board members did not differ between high effort and low effort categories.

There was a statistically significant difference in the tenure of school superintendents between high financial effort and low effort districts. The mean number of superintendents over a twenty year period was 3.88 in high effort districts and 2.25 in low effort districts.

The school superintendents of high financial effort districts had more years of formal graduate education than the superintendents of low effort districts.

Hypothesis 5 of Chapter 1 which stated that the superintendents of high financial effort districts would have greater power than the superintendents of low effort districts was not supported by the data. Likewise, the placement of the superintendents' leadership styles into three categories (i.e., passive, participative, interactive) indicated no statistically significant difference between high and low effort school districts. These findings raise significant value questions and important implications for further study of leadership strategies.

Comparison of the patterns of interaction in the power structures revealed some statistically significant differences between high and low effort school systems. The school superintendents of the high financial effort districts exhibited more active participation in educational issues than the superintendents of low effort school systems. The data also showed that superintendents of high effort school systems had greater involvement in nonschool issues of their communities. These differences were statistically significant at the .01 level.

The data supported the contention of numerous educators that school progress has greater possibility of success if the influentials of community power structures are involved in educational activity. The mean extent of involvement score for influentials of high effort school systems was 3.08. The mean score was 2.00 for low effort districts. This difference was statistically significant at the .025 level. Causation cannot be assumed from these data. Nevertheless, the findings support the idea that differences in leadership strategies may well produce different levels of educational progress.

CHAPTER 5

RELATIONSHIP OF CHARACTERISTICS OF COMMUNITY INFLUENTIALS TO LOCAL FINANCIAL EFFORT

A large amount of personal data about the leaders of the twenty-four selected school districts was obtained by means of interviews structured by Interview Guide B, Appendix B. This included such information about the influentials as age, length of residence in school district, number of children, number of adult relatives living in school district, occupation, schools attended by children, formal education, organizational membership, formal leadership positions, church membership, participation in community issues, and whether the leaders were born in the school district under study. Information was also obtained about the leadership behavior of school officials in the school districts. In this chapter the relationship of such measures as named above to local financial effort among the districts will be presented and discussed. The staff hypothesized that certain characteristics of community influentials of high effort districts would be different from the characteristics of leaders in low effort districts. Much of the data for this chapter were taken from the study by Bashaw.[1]

Occupational Source of Power and Financial Effort

In his study of two cities in New York, Presthus differentiated the community influentials into three categories referred to as economic, political and specialist types.[2] The research staff decided to employ these differentiations for leaders in the twenty-four school districts. A general description of each category as used in the project follows.

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[1] William H. Bashaw, The Relationship of Characteristics of Community Leaders To Typology of Power Structure and Level of Financial Effort for Education in Twenty-Four Selected School Districts in Four States (Doctoral Dissertation, University of Florida, 1968).

[2] Robert Presthus, Men at the Top: A Study in Community Power (New York: Oxford University Press, 1964).

Economic. Persons whose power is based upon their leadership role in the economic system. This would include persons who own or control wealth and can influence decision-making because of their wealth or economic status or leadership role.

Political. Persons who derive their power from the fact that they now hold or have held public office in the community or who have evidenced long participation in political (partisan) affairs. The so-called professional politician is typical of this category.

Specialist. Persons whose power rests upon a special area of competence or a restricted area of influence such as school superintendent, minister, school board member, labor union leader, college president, ethnic group leader, or social worker. Persons in this category tend to have a specialized interest in one area of community living.

The specialist category was also treated as residual. If a leader was not clearly political or economic, he was placed in the specialist category.

The occupational distribution of all leaders of the selected districts by categories is shown in Table 5-1. The reader will note that certain occupations are typical of the categories. The economic category is predominated by bankers, businessmen, attorneys, realtors, and corporation executives. Elected public officials are predominant in the political category. Schoolmen, clergymen, and other professional and special type leaders were placed in the specialist group. In some instances persons with similar occupations appear in all three categories. In most instances patterns of occupations tended to be characteristic

Table 5-1

Occupational Distribution of Leaders

Economic		Political		Specialist	
Occupation	Number	Occupation	Number	Occupation	Number
Banker	79	Elected State Position	43	School Superintendent	21
Retail Merchants (Druggist, Hardware Store, Restaurant, Drycleaner, Nurseryman, Men's Shop)	53	City Council or Commission	41	Board of Education Member	21
Ranchers, Farmers, Food Processors, Food Retailers	40	Mayor	28	Clergyman	20
Attorney	37	Judge	12	University of College President	14
Corporation Executive	33	County Court (Commissioner)	11	Physician	8
Real Estate and Land Developer	26	State Appointed Positions	10	Chamber of Commerce Official	7
Newspapermen	26	Local Political Committee	9	City Manager	7
Insurance	25	Sheriff	9	School Principal	7
Utilities and Fuel	20	State Political Committee	4	Labor Leader	4
Retail (large) Business Executive	15	National Elected Position	4	Newspapermen	4

Table 5-1 (Continued)

Occupational Distribution of Leaders

Economic		Political		Specialist	
Occupation	Number	Occupation	Number	Occupation	Number
Timbermen and Paper Industry	14	County Tax Commissioner	3	Director, Business Associations	4
Automobile Dealers	11	National Political Committee	2	President of Farm Organization	3
Public Service Executives (Chamber of Commerce, Development Commission, Telephone)	10	County Attorney	2	Public Authority (Housing, Hospital, Water)	3
Construction	9	City Manager	1	Public Official	3
Investor and Financier	9	County Official	1	Attorney	2
Funeral Director	6	Transportation Director	1	Minority Group Leader	2
Farm Equipment Dealer	5	Chamber of Commerce Official	1	Hospital Administrator	2
Physician	4	Merchant	1	Broadcaster	2
Broadcasting	4	Farm Implement Dealer	1	Director, Public Service	2
Mining	3	Marble Executive	1	School Administrator	1
C. P. A.	1			Teacher	1

Table 5-1 (Continued)

Occupational Distribution of Leaders

Economic		Political		Specialist	
Occupation	Number	Occupation	Number	Occupation	Number
Retired (Inherited Wealth)	1			Architect	1
				Accountant	1
				President of State League of Women Voters	1
				Ranking Officer, Armed Forces	1
	431		185		142

in one of the three categories. For example, the attorney's source of power tended to be in the economic category although some attorneys appeared in all categories.

School superintendents were found to be influential in twenty-one of the districts. Somewhat surprising is the weak showing of school board members. Only twenty-one board members were influential in their communities.

The distribution of leaders in categories by school districts and by states is shown in Table 5-2. Of the 758 leaders identified in all school districts 56.9 percent were economic, 24.4 percent were political, and 18.7 percent were specialist.

There was greater representation from the economic and specialist categories in Illinois. Considerable variation existed in the political category which was very low (11.3 percent) in Illinois and relatively high (31.2 percent) in Kentucky. Florida districts had the lowest representation of specialists.

The distribution of community influentials among the categories should be related to the level of local financial effort in the district. Several authors have written about communities that were dominated by the economic community. Presumably democratic government depends upon a viable representation of political leaders as representatives of the people. Political scientists have emphasized the importance of citizen participation in the decision-making process.

The Chi Square was employed to estimate the significance of the difference in category representation in the power structure between high financial effort and low effort districts. The comparisons are shown in Table 5-3. The difference was significant at the .05 level.

Table 5-2

Distribution of Influentials in Categories
By School Districts and States

District	Total Leaders	Economic		Political		Specialist	
		No.	%	No.	%	No.	%
Florida							
Logan	37	26	70.3	9	24.3	2	5.4
Everest	39	17	43.6	13	33.3	9	23.1
McKinley	36	19	52.8	14	38.9	3	8.3
Whitney	32	20	62.5	6	18.8	6	18.7
Ranier	36	22	61.1	10	27.8	4	11.1
Shasta	36	26	72.2	5	13.9	5	13.9
	216	130	60.2	57	26.4	29	13.4
Georgia							
Carter	31	18	58.1	4	12.9	9	29.0
Andrews	25	11	44.0	12	48.0	2	8.0
Anderson	26	14	53.8	8	30.8	4	15.4
Benne	24	18	75.0	4	16.7	2	8.3
Scott	27	14	51.9	6	22.2	7	25.9
Ford	22	5	22.7	10	45.5	7	31.8
	155	80	51.6	44	28.4	31	20.0
Kentucky							
Pine	39	17	43.6	17	43.6	5	12.8
Oak	39	16	41.0	16	41.0	7	18.0
Cedar	35	21	60.0	6	17.1	8	22.9
Scenic	28	14	50.0	7	25.0	7	25.0
Hub	31	16	51.6	9	29.0	6	19.4
Farm	30	19	63.3	8	26.7	3	10.0
	202	103	51.0	63	31.2	36	17.8
Illinois							
Camelot	28	21	75.0	3	10.7	4	14.3
Marlboro	36	20	55.6	8	22.2	8	22.2
Winston	33	20	60.6	2	6.1	11	33.3
Tareyton	30	18	60.0	4	13.3	8	26.7
Brookston	31	23	74.2	1	3.2	7	22.6
Allwyn	27	16	59.3	3	11.1	8	29.6
	185	118	63.8	21	11.3	46	24.9
Totals	758	431	56.9	185	24.4	142	18.7

Table 5-3

Contingency Table of Number of Leaders in Each Occupational Category By High and Low Effort

	Economic	Political	Specialist	Total
High	206	110	69	385
Low	225	75	73	373
Totals	431	185	142	758

Chi Square = 7.34

($X^2_{.05}$ = 5.991, df = 2)

Table 5-4 shows the analysis of the significance of the difference of proportions between the high effort and low effort school districts for each category of leaders. The difference was significant for the economic leaders and political leaders but not significant for the specialist. A higher percentage of the economic leaders were in low effort districts. A higher percentage of the political leaders were in the high effort districts.

Table 5-4

The Difference of Proportions of Each Occupational Category in High and Low Level Districts

Leadership Category	High Level	Low Level	z Test	P
Economic	53.5	60.3	-1.89	< 0.05
Political	28.6	20.1	2.75	< 0.005
Specialist	17.9	19.6	-0.58	N.S.

In the above comparisons, all of the top influentials identified in the power structures of the selected districts were considered. As explained in Chapter 4, a formula relying on three factors was used to measure the extent of power held by each leader. In many school districts the political leaders had higher power scores than economic leaders. The proportion of political leaders increased in both high and low effort districts as the level of influence was increased. Consequently, the data were analyzed using the six highest ranked leaders and fifteen highest ranked leaders of the selected districts. None of the differences observed was statistically significant at the .05 level. Examination by states produced some significant differences. In Florida and Georgia there was a statistically significant higher proportion of political leaders in high effort districts among the fifteen highest ranked influentials. There was a significantly higher proportion of economic leaders in the low effort districts of Georgia.

Relationship of Personal Characteristics of Leaders to Local Financial Effort

If one employed general systems theory to explain why some districts had higher financial effort than others, the personal characteristics of the leaders and changes in population characteristics of the districts would be important. For example, in school districts with a high degree of closure or provincialism, the number of adult relatives of leaders should be significantly higher than districts with a high degree of openness. The years of residence in the district of the leaders of provincial (closed) districts should be significantly different from progressive districts. One would expect differences in age, formal education, and other personal characteristics of the leaders among the selected districts. In the sections which follow, some of these observations are supported by the data.

Age of Influentials

The average age of the influentials in the selected districts by rank and for all leaders is shown in Table 5-5 below. There was no statistically significant difference between the ages of leaders in high financial effort and low effort districts.

Table 5-5

Average Age of Influentials By High and Low Effort Districts

	High Effort	Low Effort
6 highest ranked leaders	52.04	53.30
15 highest ranked leaders	52.51	52.99
All leaders	52.56	52.74

Formal Education of Influentials

Table 5-6 shows that, except for the six highest ranked leaders, there was a statistically significant difference in formal education of leaders in the high effort and low effort districts. The leaders of high effort districts had more formal education than influentials in low effort districts.

Table 5-6

Years of Formal Education of Influentials
By High and Low Effort

	High Effort	Low Effort	t test of difference	P
6 highest ranked leaders	15.81	15.46	0.71	N. S.
15 highest ranked leaders	15.87	15.25	2.01	< 0.025
All leaders	15.90	15.32	2.42	< 0.01

The breakdown of the data by states revealed greater differences in formal education in some cases. This analysis is shown in Table 5-7 below.

Table 5-7

Years of Formal Education of Influentials by High and Low Effort and By States

	High Effort	Low Effort	t test of difference	P
Florida	15.36	14.27	2.48	<0.01
Georgia	15.64	15.28	0.78	N. S.
Kentucky	16.50	14.84	3.35	< 0.0005
Illinois	15.99	16.91	-1.88	0.05

There was a wide difference in the formal education of leaders of high effort and low effort school districts in Kentucky and Florida. The difference was significant at the .05 level in Illinois. In this instance the leaders of lower effort districts had more education. In Georgia the difference was not significant.

Children of Leaders

Comparisons were made of the number of children of influentials in high effort and low effort districts. The differences in average number of children of influentials in high effort districts (2.48) was not significantly different from the average number of children of low effort districts (2.42).

Differences relative to the number of children of influentials attending private schools were significant for the six highest ranked and fifteen highest ranked leaders as shown in Table 5-8 below. The difference was not significant for all leaders. The highest ranked leaders of high financial effort districts had a greater tendency than their counterparts in low effort districts to send their children to private schools.

Table 5-8

Percent of Children in Private Schools of the Six Highest Ranked Leaders, Fifteen Highest Ranked Leaders, and All Leaders, By High and Low Effort Districts

	High Effort	Low Effort	z test of difference	P
6 highest ranked leaders	17.24	7.05	2.95	<0.0025
15 highest ranked leaders	15.94	11.49	1.88	<0.05
All leaders	12.66	10.25	1.56	N. S.

Native Residence of Leaders

Using general systems concepts, one would expect to find that the more provincial a school district the higher the percentage of leaders who were native born in the community. Table 5-9 shows data relative to the percent of the influentials who were native born or indigenous to the school district by high and low effort.

Table 5-9

Percent Who Were Native Residents of Their District of the Six Highest Ranked Leaders, Fifteen Highest Ranked Leaders, and All Leaders, By High and Low Effort Districts

	High Effort	Low Effort	z test of difference	P
6 highest ranked leaders	44.44	59.72	-1.84	<0.05
15 highest ranked leaders	37.77	61.11	-4.43	<0.0005
All leaders	36.20	60.27	-6.52	<0.0005

A much greater percent of the leaders of low effort districts were native born residents. When the data were analyzed by individual states Georgia was the only state in which this difference was not statistically significant.

These data tend to support the idea that the leaders of power structures of low effort districts tended to be locals, whereas the leaders of higher effort districts included more cosmopolitans. As the reader can see in Table 5-9, the difference in native residency is very great, especially among all leaders and among the fifteen highest ranked leaders. These data suggest a higher degree of openness to the emergence of new leaders into positions of power in the high effort districts.

Organizational and Church Membership

An analysis was made of the organizational membership patterns of the influentials. There was no statistically significant difference in organizational membership patterns of leaders in the high and low effort districts. The analysis of patterns of church membership likewise showed no statistically significant differences. As Table 5-10 shows, most of the influentials belonged to a Protestant denomination. These results were expected. Organizational or church membership among the top influentials of a power structure are usually fairly constant and not subject to variation. Leaders are expected to belong to organizations, and they do.

Adult Relatives in Community

Table 5-11 shows data about the numbers of adult relatives of the leaders living in the school district by high effort and low effort districts.

Table 5-10

Church Membership of Leaders By High and Low Effort Districts

High Effort		Low Effort	
Percent Membership	Church	Percent Membership	Church
22.38	Methodist	31.01	Methodist
19.19	Baptist	29.28	Baptist
19.19	Presbyterian	18.26	Presbyterian
13.08	Episcopal	4.63	Catholic
8.13	Catholic	4.63	Episcopal
4.94	Christian	4.05	Christian
2.90	Jewish	2.89	Jewish
2.90	Congregational	1.73	None
2.03	Lutheran	1.15	Lutheran
1.45	Unitarian	1.15	Unitarian
1.16	None	1.22	Miscellaneous
2.65	Miscellaneous		

Table 5-11

Average Number of Relatives Per Leader Who Resided in The District, Excluding Leader's Own Household, By High and Low Effort Districts

	High Effort	Low Effort
6 highest ranked leaders	6.53	15.44*
15 highest ranked leaders	6.36	13.34*
All Leaders	6.38	15.29*

*Leaders in one district had more relatives than in all others combined. Adjustment of the mean was made by assigning to this district the average of the other 11 districts. The actual mean number of relatives in low effort districts was 24.36 for all leaders, 29.41 for the 15 highest ranked, and 46.31 for the 6 highest ranked.

These data are very revealing of the tendency toward system closure or provincialism among the low effort districts. The leaders of low effort districts had more than twice the adult relatives living in their districts than the leaders of low effort districts. The difference is obviously statistically significant. This difference was noted in the data when broken down by states as shown in Table 5-12 below. The element of family ties is a potent power resource. A high degree of this power resource could result in clannishness in the power structure and monopolistic or consensual closure.

Table 5-12

Average Number of Adult Relatives of Leaders By States and By High and Low Effort

States	High Effort	Low Effort
Florida	3.26	20.52
Georgia	5.44	8.48
Kentucky	13.24	29.82
Illinois	2.77	7.27

Participation In Issues

The percent of participation in issues of leaders of high and low effort school districts is compared in Table 5-13. Some schoolmen have been hesitant to encourage the participation of community influentials in educational decisions. The data from this study indicate that this may be an unwise attitude.

These data show that the highest ranked leaders of high effort districts participated in issues more frequently than the influentials of low effort districts. The difference was not significant for all leaders. This is consistent with the finding presented in Chapter 4 that the school superintendents of high effort school districts were involved with community influentials in school decisions more frequently than was true of low effort districts.

Table 5-13

Percent of Participation in Community Issues By the Six Highest Ranked Leaders, Fifteen Highest Ranked Leaders, and All Leaders, By High and Low Effort Districts

	High Effort	Low Effort	z test of difference	P
6 highest ranked leaders	79.10	73.56	1.79	< 0.05
15 highest ranked leaders	68.26	62.64	2.56	< 0.01
All leaders	51.88	50.69	0.74	N. S.

Summary

In this chapter the relationship of the characteristics of community leaders and educational leadership patterns to local financial effort has been discussed. Some of the data are very revealing. The data support concepts of openness and closedness (provincialism or lack of provincialism) of the power structures in the districts. Under general systems theory, one could hypothesize that the differences in financial effort could be explained by the openness or closedness of the power structures among the selected districts. Some of the findings supporting this view follow.

This study demonstrated that the power structures of low financial effort districts were dominated more by leaders from the economic system than in high effort districts. Furthermore, a larger percentage of the leaders of high effort districts were in the political category. The differences were statistically significant. Thus these data support the idea often expressed that education progresses more where the power structures are less dominated by leaders from the economic community.

The ages of influentials in high effort school districts were not statistically different from the ages of leaders in low effort districts.

The leaders of high effort districts had more formal education than the influentials of low effort districts in Florida and Kentucky but less in Illinois and there was not a significant difference in Georgia.

The differences in number of children among the influentials was not statistically significant. The data demonstrated that a much larger number of the higher ranked leaders of high effort school districts sent their children to private schools.

Comparison of the number of leaders who were native born between high effort and low effort districts revealed that a much higher percentage of the leaders in low effort districts were native born to the district. When compared by individual states Georgia was the only state in which this difference was not significant. These data are indicative of a tendency toward greater system closedness in low effort districts. More of the leaders of low effort districts were locals.

A tendency toward greater system openness among the high financial effort districts is indicated by the examination of data concerning adult relatives of leaders in the districts. The leaders of low effort districts had more than twice the adult relatives living in their districts than the leaders of high effort districts.

The community influentials of high effort districts participated in civic issues more often than the leaders of the low effort districts. As presented in Chapter 4, the community influentials of the high financial effort districts manifested greater involvement in school activities and decisions than the influentials of low effort districts. These two consistent findings support the idea that the way of life in a community could be influenced by the active involvement of community leaders.

CHAPTER 6

BELIEFS AND FINANCIAL EFFORT

The original design of the study included the investigation of two questions about the relationship of beliefs held by sample populations to financial effort in the selected districts: How are certain beliefs among the population, power wielders, and teachers in selected districts related to financial effort? Do economic beliefs have a closer relationship than educational beliefs to liberal or conservative fiscal policies among selected school districts?

Forty-five of the items from the Florida Scale of Civic Beliefs (FSCB) were used to measure the civic beliefs of the populations sampled.[1] The FSCB measures the single dimension of liberalism and conservatism. It contains no educational belief items. The items relate to such areas as economics, function of government, foreign affairs, and the nature of man and of society. The items from this scale relating to economic liberalism or conservatism were used to measure the economic beliefs. The forty-five FSCB items used are shown in Appendix D.

Considerable energy was invested in constructing an educational beliefs scale to measure liberalism and conservatism in education. The object was to construct a scale for investigating the relationship of civic beliefs (as measured by the Florida Scale of Civic Beliefs) and liberalism and conservatism in education. The project staff developed over 170 educational belief items initially. These were subjected to intensive development and testing as is described in detail in Appendix E.

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[1] See description of scale in Marvin E. Shaw and Jack M. Wright, Scales For The Measurement of Attitudes, New York: McGraw-Hill Book Company, 1967, pp. 307-311.

As indicated in Appendix E, efforts to develop a scale to measure educational liberalism and conservatism as a single factor failed. Instead, a scale with five areas (or factors) resulted from the efforts. These areas were: finance (5 items), responsibility for providing education (4 items), value of education (3 items), curriculum (3 items) and discipline (4 items).

The forty-five items from the Florida Scale of Civic Beliefs and the nineteen educational belief items were administered as a single instrument and scored separately for the analyses described herein. Each of the items on both scales was scored on a five-point continuum. Thus it was possible for respondents to make a high (liberal) score of 225 and a low (conservative) score of 45 on the civic beliefs scale. A score of from 25 to 5 would be possible on the five financial belief items of the educational beliefs scale.

The instrument was administered to population samples in each of the twenty-four districts in which intensive power studies were conducted. It was administered to three different population samples in each district: (1) the community influentials, (2) a sample of the teachers, (3) a sample of the registered voters.

As indicated in Chapter 4, three of the highest financial effort and three of the lowest financial effort districts above 20,000 population were selected for study in each state. Through intensive power studies the most powerful influentials were identified for each of these districts. The civic and educational beliefs scales were administered through a personal interview with each of the influentials in each of the districts. With the exception of a few districts, participation of the influentials in this phase of the study was excellent. Over 80 percent of the influentials of the four states participated. The instruments were administered to a stratified random sample of the teachers and registered voters in each of the twenty-four districts studied.

Studies of the Relationship of Civic and Educational Beliefs to Financial Effort

Before proceeding to a total analysis of the results, mention should be made of the results of individual state analyses.[2] Each of the state studies represented extensive analyses of the relationship of civic and educational beliefs of the community influentials, teachers, and registered voters to financial effort of the selected school districts. The t-test was employed to estimate the significance of the differences in civic and educational beliefs among the populations sampled. Table 6-1 summarizes the findings within each of the states concerning differences among the population samples. In this table the "high" and "low" refer to the high effort and low effort districts in the states. For instance, in each instance of significant difference noted in each state in civic beliefs, the high effort districts had the highest mean civic belief score.

In the state of Florida the community influentials, teachers, and voters of high financial effort districts held statistically significant higher mean civic belief scores than similar groups sampled in low effort districts. The civic belief scores of teachers were more liberal than the scores of voters and influentials. Significant differences were noted in only two instances out of fifteen comparisons of educational beliefs between the high effort and low effort districts.

In the selected districts of Georgia the mean civic belief scores of community influentials of high effort districts were significantly

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[2] The data for this section of the report were abstracted largely from the following numbered doctoral dissertations listed in Appendix H: 4, 8, 15 and 21.

Table 6-1

Types* of School Districts in Which Community Influentials, Teachers or Voters Had Significantly Higher Beliefs Scores in Certain Belief Areas

Belief Area	Sample	Florida	Georgia	Kentucky	Illinois
Civic beliefs	Community Influentials	High**	High**	--	--
	Teachers	High**	--	High***	High***
	Voters	High**	--	High***	--
Finance beliefs	Community Influentials	--	High***	--	--
	Teachers	--	High***	--	High***
	Voters	--	Low***	High***	Low***
Responsibility for providing education beliefs	Community Influentials	--	--	--	--
	Teachers	--	Low**	--	High***
	Voters	--	Low***	--	--
Value of education beliefs	Community Influentials	--	--	--	--
	Teachers	--	Low**	--	Low***
	Voters	--	Low***	--	Low***
Curriculum beliefs	Community Influentials	--	High**	--	Low***
	Teachers	--	--	--	High***
	Voters	High***	Low***	High***	Low***
Pupil discipline beliefs	Community Influentials	--	High**	--	--
	Teachers	--	High***	--	High**
	Voters	High***	--	--	High**

*High or Low in this table refers to high or low effort districts
**0.05 level of significance
***0.01 level of significance

higher than the mean scores of influentials of low effort districts. This was similarly true of the influentials' beliefs in the three of the educational belief areas: financial beliefs, curriculum beliefs, pupil discipline beliefs. However, the reader will note that statistically significant higher mean scores were found in the low effort districts in Georgia for the following categories: finance beliefs of voters; responsibility for providing education beliefs for teachers and voters; value of education beliefs for teachers and voters; and curriculum beliefs for voters.

In Kentucky the differences in civic beliefs for teachers and voters were statistically significant. Scores in the high effort districts were higher (more liberal) than for low effort districts. However, as was found for Florida districts, only two out of fifteen comparisons of educational beliefs were statistically significant.

The Illinois study provided results somewhat reminiscent of the Georgia study discussed previously. The civic beliefs of teachers in high effort districts were higher than the civic beliefs of teachers in low effort districts. However, in half of the cases where statistically significant differences in educational beliefs were noted, the higher mean scores prevailed in low effort districts.

By way of summary, the individual state studies indicated that differences in civic beliefs were more consistent than differences in educational beliefs. That is, in all instances in which statistically significant differences in civic beliefs were noted, the higher mean scores prevailed in the high effort districts. The higher score would indicate a more liberal response. Not to be overlooked also is the fact that in seven of the twelve comparisons of civic beliefs the differences were statistically significant. The differences in educational beliefs were statistically significant in only twenty-five of the sixty within-state comparisons, and in eleven instances the lower effort districts had the higher mean scores. This directional tendency of civic beliefs was not supported in the case of educational beliefs.

Comprehensive Analyses of All Selected Districts

The remaining paragraphs of this section report the results of analyses of the twenty-four selected districts.[3] The median civic belief and educational belief scores are provided in Appendix E. Ignoring the possibility of spurious correlations, Table 6-2 shows the calculated Pearson product moment (r) correlations between civic and educational beliefs and financial effort using raw scores as a basis. Note that the correlation between civic beliefs and financial effort was significant for all three groups sampled either at or beyond the .05 level of significance. However, as explained below, caution needs to be used in interpreting the correlation coefficients without converting the raw scores to standard scores.

As was explained in earlier chapters in this report, the staff was dealing with a consistent stratification of effort levels among the four states. Thus there was the problem of extraneous variables (i.e., legal restrictions, cultural history, fiscal dependence) influencing levels of effort among the states. By standardizing the data, the impact of the extraneous variables is restricted; however, standard scores restrict the impact of the independent variables also by depressing variation. Nevertheless, authorities usually feel that standardization of the data provides more comparable values than raw scores.

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[3] Data from the following study was used in this discussion: James Longstreth, The Relationship of Beliefs of Community Leaders, Teachers, and Voters to School Fiscal Policy and Typology of Community Power Structure (Doctoral dissertation, University of Florida, 1967).

Table 6-2

Raw Score Correlations Between Civic and Educational Beliefs and Financial Effort*

Beliefs	Community Influentials	Teachers	Registered Voters
Civic	.55***	.47**	.67***
Economic	.30	.31	.33
Educational finance	.01	.15	-.13
Responsibility for providing education	.27	.09	-.21
Value of education	.32	.18	-.35
Curriculum	.53***	.34	.17
Pupil discipline	.32	.36	.46**

*The several measures of beliefs and financial effort included herein were calculated using raw score data. Caution is suggested about inferences made from these data as the possibility of spurious correlations appears likely.

** 0.05 level of significance

*** 0.01 level of significance

The data were converted to standard (z) scores and the correlation coefficients recalculated with the results shown in Table 6-3. None of the correlations was significant, indicating the spurious nature of the correlation measures by using raw data. The limitations of parametric procedures that were imposed by the data suggested the use of nonparametric analyses.

Table 6-3

Z Score Correlations Between Civic and Educational Beliefs and Financial Effort*

Beliefs	Community Influentials	Teachers	Registered Voters
Civic	.14	.12	.10
Economic	.05	.06	.05
Educational finance	.05	.03	-.05
Responsibility for providing education	.06	.03	-.01
Value of education	.00	.01	-.06
Curriculum	.03	.09	.00
Pupil discipline	.07	.09	.07

*The several measures of beliefs and financial effort included herein were converted to Z scores. None of the correlation measures above was found to be statistically significant.

As discussed previously, financial effort was the major criterion for the selection of school districts in each state. Three of the highest financial effort and three of the lowest financial effort districts were selected for intensive investigation in each state. Population size was considered in the selection. Thus, twelve of the districts were categorized as high effort districts and twelve of the districts were categorized as low effort districts. By locating the median belief scores as above (+) or below (-) the mean for all districts and using the high effort and low effort categories, the data were arranged in 2 x 2 contingency tables. Fisher's Exact Probability Test (p) was applied to determine the probability of the resulting distributions occurring by chance.

Financial Effort and Civic Beliefs

The median civic belief scores for all districts were arranged as above (+) or below (-) the mean for all districts (high effort "H" and low effort "L") and cast into contingency tables for each group sampled. The results as shown below support hypothesis 6 of Chapter 1 which stated that the beliefs of influentials, teachers, and registered voters would be more liberal among the high financial effort districts than among low effort school systems.

		Community Influentials		Teachers		Registered Voters	
		L	H	L	H	L	H
Civic Beliefs	+	4	8	5	10	4	6
	-	8	4	7	2	8	6
		$p = .11$		$p = .02$		$p = .27$	

These tables show a definite trend toward polarity supportive of a relationship between civic beliefs of the groups sampled and the extent of financial effort among the selected districts. The probability that the proportions would be attained by chance (p) was only .11 (or 11 times out of 100) for the community influentials, .02 (or 2 times out of 100) for teachers. The probability of chance (p) for registered voters was higher. As will be noted in the following discussion, these were the highest relationships observed.

Economic Beliefs and Financial Effort

The examination of the relationship of the ten economic items on the FSCB was not complete because the data for twenty of the seventy-two groups among the districts were not available. The districts for which data were not available are indicated in Appendix F. By using data available the following contingency tables were assembled.

		Community Influentials			Teachers			Registered Voters	
		L	H		L	H		L	H
Economic Beliefs	+	4	3	+	5	7	+	5	4
	-	4	5	-	4	2		5	4
		p = .50			p = .15			p = .63	

Except for teachers the probability (p) that the relationships would occur by chance was high. These data failed to support hypothesis 7 of Chapter 1 which stated that economic beliefs had a stronger relationship to school fiscal policy than educational beliefs. Nevertheless, the research staff feels that the findings could have been affected by the non-availability of data for several of the districts. Therefore, the findings concerning hypothesis 7 are inconclusive.

Educational Beliefs and Financial Effort

The relationship between the different educational belief scores and financial effort for the five areas in the scale failed to indicate the strong relationships as found for the civic beliefs and financial effort. The distributions of beliefs about educational finance and effort for the three sample groups are reflected in the contingency tables which follow. Little relationship is indicated.

		Community Influentials			Teachers			Registered Voters	
		L	H		L	H		L	H
Beliefs about educational finance	+	8	9	+	7	8	+	7	9
	-	4	3	-	5	4	-	5	3
		p = .47			p = .50			p = .33	

Similarly, little relationship between beliefs about responsibility for providing education and financial effort is shown by the following contingency tables.

		Community Influentials			Teachers			Registered Voters	
		L	H		L	H		L	H
Beliefs about responsibility for providing education	+	7	6	+	5	7	+	7	8
	-	5	6	-	7	5	-	5	4
		p = .45			p = .45			p = .50	

Contingency tables for distributions of financial effort and beliefs about the value of education are shown below. These tables indicate a doubtful relationship between the two measures.

		Community Influentials			Teachers			Registered Voters	
		L	H		L	H		L	H
Beliefs about the value of education	+	4	7	+	9	10	+	10	7
	-	8	5	-	3	2	-	2	5
		p = .21			p = .50			p = .18	

Little significant relationship between beliefs about curriculum and financial effort and between beliefs about pupil discipline and financial effort is supported by the following tables:

		Community Influentials			Teachers			Registered Voters	
		L	H		L	H		L	H
Beliefs about curriculum	+	4	5	+	2	4	+	6	5
	-	8	7	-	10	8	-	6	7
		p = .50			p = .32			p = .45	

Any meaningful relationship between beliefs about curriculum and discipline are doubtful from these analyses.

		Community Influentials		Teachers		Registered Voters	
		L	H	L	H	L	H
Beliefs about pupil discipline	+	5	6	5	8	5	5
	-	7	6	7	4	7	7
		p = .45		p = .21		p = .69	

Summary

In this chapter data were presented in answer to two questions: How are certain beliefs of voters, community influentials, and teachers of selected school districts related to financial effort? Are economic beliefs more closely related to school fiscal policy than educational beliefs?

There was support for a relationship between the civic liberalism and conservatism beliefs of the sample populations and financial effort. The community influentials and teachers of high financial effort school districts had more liberal scores on the Florida Scale of Civic Beliefs than comparable samples in the low effort districts. This was supported by the application of a nonparametric test of probability. The correlation coefficients were significant when raw scores were used but not significant when the scores were converted to standard values. The data partly support hypothesis 6 of Chapter 1 which stated that the beliefs of community influentials, teachers, and registered voters, and of teachers of high financial effort school districts would be more liberal than the beliefs of similar groups in low effort school districts.

The data for educational beliefs failed to support hypothesis 6. There was no relationship between the areas measured on the educational beliefs scale and financial effort. Thus liberalism and conservatism beliefs, as measured by the FSCB, were more closely related to school fiscal policy than the educational beliefs sampled. Perhaps what citizens profess to believe about education is of less consequence for support or lack of support for education than many educators assume.

Economic beliefs as measured by ten items from the FSCB were not more closely related to effort than educational beliefs. Thus, hypothesis 7 of Chapter 1 was not supported by these data.

CHAPTER 7

RELATIONSHIP OF PATTERNS OF PARTICIPATION, CIVIC AND EDUCATIONAL BELIEFS, CHARACTERISTICS OF COMMUNITY INFLUENTIALS AND OTHER LEADERS TO TYPOLOGY OF POWER STRUCTURE

In Chapter 4, a typology for classifying community power structures was presented. The following four types of community power structures were identified: (1) monopolistic, (2) multigroup noncompetitive (3) competitive elite, (4) segmented pluralism. This typology is actually a power continuum ranging from communities in which one small group of elites hold and exercise most of the power to make important community decisions, to communities in which the power to make decisions is widely dispersed among numerous groups and their leaders. Since this is a power continuum, it is possible to combine types (1) and (2) and also types (3) and (4) identified above. When the number of communities being studied is small, for statistical purposes it is desirable to divide the power continuum into two parts, one of which can be classified as competitive and the other noncompetitive.

In this chapter a number of variables are analyzed with reference to their relationship to types of power structures.

Citizen Participation in Decision Making Under Two Different Types of Power Structures[1]

It was hypothesized that the extent of citizen participation in community decision-making, the type or pattern of citizen participation in community decision-making, and the perceptions citizens have of their effectiveness in participating in decision-making differed under two types of power structures (monopolistic and competitive elite).

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[1] This section was largely abstracted from a doctoral dissertation by Marm M. Harris entitled The Extent, Pattern and Perceived Effectiveness of Citizen Participation in Decision Making Under Two Different Types of Power Structure, (Gainesville, Florida, College of Education, University of Florida, 1967).

The following questions were of particular interest:

Is there a significant difference in the extent of citizen participation in making community decisions under a monopolistic power structure than under a competitive elite power structure?

Is the type or pattern of citizen participation in community decisions under a monopolistic power structure significantly different than that of citizens under a competitive elite power structure?

Is the efficacy (perceptions of their effectiveness in participation) of citizens under a monopolistic power structure significantly different than that of citizens under a competitive elite power structure?

A stratified random sample of two hundred registered voters in a school district under a monopolistic power structure and one under a competitive elite power structure of comparable size were interviewed to determine the extent and pattern of their participation in community decision-making. An attempt was also made to determine the efficacy (perceived effectiveness) of the interviewees in each of the districts.

The first phase of this study was concerned with the extent of citizen participation in decision-making in each of the districts, one of which was under a monopolistic power structure and the other was under a competitive elite power structure. The extent of a citizen's participation in each district was determined by the number of points awarded for participating. There were twelve levels of possible participation and the extent of a citizen's participation was determined by the number of levels in which he participated in two pre-selected community decisions. The primary question answered in this phase of the study was whether there was a significant difference in the extent of citizen participation in decision-making at the community level under two different types of power structures--competitive elite and monopolistic. This was determined by use of the t-test.

The second phase of this study was concerned with the pattern of citizen participation in each of the two districts. An instrument was developed for classifying the pattern of citizen participation and also measuring the extent of citizen participation, this instrument being based on a model of the hierarchy of political involvement developed by Milbrath.[2] Following is a chart showing the test instrument:

Chart 1

Hierarchy of Citizen Participation

Level of Participation	Score
I. Gladitorial Participation	
1. Holding public office or party office	12
2. Candidate for office	11
3. Soliciting political funds	10
4. Attending a political caucus or strategy meeting	9
5. Active member of political party or some other group--making speeches, passing out literature, donating time to headquarters staff, working on a committee, making effort to get people registered, preparing registration lists, arranging car pools for election days, attending political meetings or dinners	8
II. Transitional Participation	
1. Donating money or other property	7
2. Writing letters to the editor or other officials	6
3. Attending public hearings on budget, etc.	5
III. Spectator Participation	
1. Putting a sticker on car or wearing a button	4
2. Attempting to talk another into voting a certain way	3
3. Initiating a political discussion	2
4. Voting	1
IV. Apathetics	0

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[2] Lester W. Milbrath, Political Participation, (Chicago: Rand McNally and Company, 1965).

As in this model, voting was considered the lowest form of citizen participation in decision-making and holding a political or party office the highest. Weights of one to twelve points were assigned to each level of the hierarchy, with voting receiving one point and holding an office receiving twelve points.

The third phase of this study was concerned with whether citizens under a competitive elite power structure had a higher feeling of efficacy than citizens under a monopolistic power structure. Efficacy was defined as the perceptions a person had of his effectiveness in helping to make community decisions. This was determined by comparisons of questions four, five, six, and seven of Interview Guide A appended to this report. It was administered in each district. Each answer was weighted. Answer A was weighted three points, B was weighted two points, and C was weighted one point. The t-test was used to determine if there was a significant difference in the efficacy of citizens in one district as compared to the second district.

By taking these data and comparing them to the hierarchy of citizen participation utilized in phase two of this study, the attempt was made to determine which type of participation gave a person a feeling of efficacy under each type of power structure.

The Extent of Citizen Participation

Following is a summary of the significant findings concerning the extent of the political participation in decision-making in the district with a competitive elite power structure as contrasted with a district having a monopolistic power structure:

1. Registered voters living under the competitive elite power structure participated to a greater extent than the registered voters living under the monopolistic power structure.

2. Citizens who belonged to various organizations participated to a greater extent than citizens who did not belong to organizations. This was especially true in the participation of females. This was true regardless of the power structure involved.

3. A greater percent of the registered voters belonged to various local organizations under the competitive elite power structure than those living under the monopolistic power structure.

4. Registered voters who belonged to organizations as well as those who did not belong to organizations participated to a greater extent in decision-making under the competitive elite power structure than their counterparts under the monopolistic power structure.

5. Professional workers, the self-employed, and managers of various companies were the most active participants in community decision-making regardless of the issue and power structure involved.

6. Age of participants, both male and female, did not seem to have much bearing on the extent of citizen participation under either type of power structure.

7. There were more apathetic registered voters living under the monopolistic power structure than under the competitive elite power structure.

8. A higher percentage of the citizens voted in making local decisions under the competitive elite power structure than under the monopolistic power structure.

9. Females, in general, tended to be more apathetic than males regardless of the power structure involved.

The Pattern of Participation

Following is a summary of the significant findings concerning the pattern of participation of voters in a district with a competitive elite power structure contrasted with a district having a monopolistic power structure:

1. Registered voters who live under the competitive elite power structure had a more active political pattern than those who lived under the monopolistic power structure.

2. Registered voters who lived under the competitive elite power structure had a pattern of participation which required higher costs in terms of energy, time, and money than those who lived under the monopolistic power structure.

3. Registered voters who lived under the competitive elite power structure had a pattern of participation which was more public than those who lived under the monopolistic power structure.

4. Registered voters who lived under the competitive elite power structure had a pattern of participation higher on the hierarchy of participation than those who lived under the monopolistic power structure.

5. The percent of gladiators was much higher under the competitive elite power structure than under the monopolistic power structure.

6. The percent of participants in the transitional category was much higher under the competitive elite power structure than under the monopolistic power structure.

7. There were more spectators living under the competitive elite power structure than under the monopolistic power structure because there were fewer apathetics.

8. There was much more participation which required the use of verbal and social skills under the competitive elite power structure than under the monopolistic power structure.

9. Age had very little, if anything, to do with patterns of participation under either type of power structure.

10. Organizational affiliation and occupation were as closely related to patterns of participation as they were to the extent of participation regardless of the power structure involved.

The Perceived Effectiveness of Citizen Participation

The perceived effectiveness, voter participation was investigated in two types of studies as follows: (1) An intensive study was made in two districts, one with a monopolistic power structure and the other with a competitive elite power structure; (2) A less intensive sampling study was made in 22 districts. The findings from these two studies are reported below.

The Two District Study of Perceived Effectiveness

An intensive study was made of the effectiveness of voter participation as perceived by the citizens in a district with a monopolistic power structure as contrasted with the citizens in a district with a competitive elite power structure. Random samples of 200 citizens in each district were interviewed. These two districts were selected from the 24 districts selected for intensive study.

Following is a summary of the significant findings concerning the perceived effectiveness of citizen participation in decision-making in two districts with contrasting power structures:

1. Registered voters who lived under the competitive elite power structure did not have a higher feeling of efficacy than those who lived under the monopolistic power structure.

2. The type of power structure under which a person lived and participated in making community decisions did not have any bearing on his feelings of effectiveness.

3. Registered voters, in general, did not feel as effective in their participation concerning school matters as they did in other levels of community government regardless of the power structure involved.

4. Registered voters who participated primarily as spectators perceived themselves as being just as effective as those who participated as gladiators regardless of the power structure involved.

5. There was no relationship found between patterns of participation and feelings of efficacy regardless of the power structure involved.

6. Occupation, organizational affiliation, and age did not seem to have any bearing on feelings of efficacy regardless of the power structure involved.

7. Apathetics had as high a feeling of efficacy as participants in community decision-making.

Attention is directed to the fact that the findings reported above were based on data collected from only two school districts. Therefore, the project staff decided to explore this matter more fully in the other 22 districts selected for intensive analysis. The findings from that study are reported in the following paragraphs.

The Twenty-Two District Study of Perceived Effectiveness

A random sample of from 40 to 45 voters was carefully selected from each of the 22 districts in our 24 district sample that had not been studied for perceived effectiveness of voter participation. A total of 935 voters were interviewed in these 22 districts.

The Campbell[3] scale was used to measure the perceived effectiveness of voter participation. That scale is based on the following four questions which must be answered "yes" or "no".

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[3] Angus Campbell and Robert Z. Kahn, The Voter Decider, (Evanston: Row Peterson Company, 1954).

1. Do you feel that people like yourself have no say about what local government does?

2. Do you feel that the only way you can have a say in government is by voting?

3. Do you feel that politics and government are too complicated for you to understand what is going on?

4. Do you feel that local public officials don't care much what you think about what is going on?

Following is the scale by which answers to these four questions were scored.

Degree of Efficacy	Answers To The Four Questions	Score
Lowest sense of efficacy	4 yes	1
Low sense of efficacy	3 yes-1 no	2
Medium sense of efficacy	2 yes-2 no	3
High sense of efficacy	1 yes-3 no	4
Highest sense of efficacy	4 no	5

The voters in the sample in each district were also asked to identify or describe the type of power structure in their district by answering the following question.

1. Which of the following statements best describes your community?
   a. A small group of powerful leaders pretty much run local affairs and make most of the important decisions. ______
   b. We have two or more groups of leaders in our community who pretty much run local affairs and make most of the important decisions. However, they generally agree on

issues and we have very little public controversy over decisions. ______

c. We have two or more groups of leaders in our community who pretty much run local affairs and make most of the important decisions. They generally do not agree and we usually have public controversy over decisions. ______

d. Most issues are decided through our official public bodies, such as the city commission, school board, etc. after public consideration through news media, civic clubs, party structure, etc. ______

Actual Power Structure and Perceived Structure. The type of power structure in each of the 22 districts had already been carefully identified by methods described elsewhere in this report. Table 7-1 presents an interesting comparison of the number of voters from our sample of 935 living in each type of power structure identified by the project staff with the type of power structures those voters perceive that they were living under. It will be noted from this table that only 158 or 16.9 percent of the 935 voters were actually living in a pluralistic power structure but 577 or 61.7 percent of the voters perceived that they were living in districts with pluralistic power structures. On the other hand 205 or 21.9 percent of the sample were living in districts with monopolistic power structures but only 80 or 8.6 percent perceived that they were living in districts with that type of structure. If the pluralistic and competitive elite structures are combined and classified as competitive power structures and the multi-group noncompetitive and the monopolistic structures are combined and classified as noncompetitive, we can make a two-way typology comparison. By this method, it will be noted that 361 voters or 38.6 percent of the sample were living in districts with competitive power structures whereas 678 voters or 72.5 percent of the sample perceived that they were living in districts with competitive power structures. In contrast, 574 voters or 61.4 percent of the sample were living in districts with noncompetitive power structures while only 257 or 27.5 percent of the voters actually perceived that they were living in school districts with noncompetitive power structures. These data indicate that there was a strong tendency of the citizens in our sample to believe that the community political processes operated in accord with idealistic notions of democratic processes regardless of the type of power structure they lived under.

Table 7-1

Comparison of Numbers of Voters Actually
Living Under Each Type of Power Structure With Their
Perceptions of the Type of Structure Existing in Their Districts

Typology of Power Structure	Actual Power Structure		Perceived Power Structure	
	Number Voters	Percent	Number Voters	Percent
Pluralistic	158	16.9	577	61.7
Competitive Elite	203	21.7	101	10.8
Multigroup noncompetitive	369	39.5	177	18.9
Monopolistic	205	21.9	80	8.6
Total	935	100.0	935	100.0

Feeling of Voter Efficacy and Type of Power Structure. Table 7-2 presents a comparison of the feelings of voter efficacy in districts which have competitive power structures with their feelings in districts with noncompetitive power structures and also a comparison of voter feelings in terms of how voters perceive their local power structures. This table shows that there was no significant difference in the feelings of voter efficacy in districts which actually had competitive power structures with the feelings of voters who lived in districts that actually had noncompetitive power structures. However, there was a significant difference in voter feeling when voters are classified in accordance with how they perceive the power structure in their respective districts. If the voters perceived their districts as having a competitive power structure, their average efficacy score was 3.583, but if they perceived their districts as having noncompetitive power structures, their average efficacy score was only 2.782.

The feeling of increased efficacy as the perceived power structure changes from noncompetitive to competitive is further demonstrated when the typologies of competitive and noncompetitive are broken down into their sub-groups as is done in Table 7-3. The efficacy score of voters ranges from 2.627 in the districts perceived to be monopolistic to 3.624 in the districts perceived to be pluralistic.

Table 7-2

Feelings of Voter Efficacy in Districts With Competitive and Noncompetitive Power Structures Actual and Perceived

Typology of Power Structure	Actual Power Structure		Perceived Power Structure	
	Number of Voters	Efficacy Score	Number of Voters	Efficacy Score
Competitive	361	3.379	678	3.583
Noncompetitive	574	3.352	257	2.782
Total	935	3.363	935	3.363

Feeling of Voter Efficacy and Level of Political Participation. A study was also made of the level of political participation of the 935 voter sample and their perceived efficacy. The results of that study are summarized in Table 7-4. As the level of participation increased, the feeling of voter efficacy increased. The highest level of voter participation, the gladiator level, had an efficacy score of 3.859, whereas the lowest level, the apathetic, had an efficacy score of 3.000.

Table 7-3

Relationship of Perceived Power Structure
To Perceived Voter Efficacy

Typology of Power Structure	Number of Voters	Efficacy Score
Pluralistic	577	3.624
Competitive Elite	101	3.347
Multigroup Noncompetitive	80	3.125
Monopolistic	177	2.627
Total	935	3.363

Table 7-4

Perceived Voter Efficacy By Level of Participation

Level of Political Participation	Number of Voters	Efficacy Score
Gladiator	213	3.859
Transitional	317	3.385
Spectator	313	3.109
Apathetic	92	3.000
Total	935	3.363

The Relationship of Beliefs of Community Leaders, Teachers and Voters to Typology of Community Power Structure[4]

What is the extent of the relationship between the beliefs of community influentials, teachers, and registered voters as measured by the Florida Scale of Civic Beliefs and the Educational Beliefs Scale and the typology of the local community power structure?

The twenty-four districts selected for other phases of this study were utilized for analyzing the relationship of beliefs to typology of power structure. Three high local school financial effort and three low financial effort districts among districts of 20,000 population or more in the states of Florida, Georgia, Kentucky and Illinois comprised the sample. The three high and the three low effort districts in each state were selected so that the small, medium and large size districts would be represented in each high effort and low effort sample.

The typology of the power structure of each district was determined by methods described elsewhere in this report. The power structure typology model provided for the classification of power structures as monopolistic elite, multigroup noncompetitive elite, multigroup competitive, and segmented pluralism. This typology model is in effect a continuum ranging from monopolistic, noncompetitive to competitive pluralism.

In order to analyze the data for the purpose of discovering relationships between the civic and educational beliefs and the typology of local community power structure, the typological categories on the

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[4] This section was largely abstracted from a doctoral dissertation by James W. Longstreth, entitled The Relationship of Beliefs of Community Leaders, Teachers, and Voters to School Fiscal Policy and Typology of Community Power Structure, (Gainesville, Florida, College of Education, University of Florida, 1967).

continuum were ranked from 1-4. Those communities characterized by a segmented pluralism were assigned a rank of four, competitive elite districts were assigned a rank of three, multigroup noncompetitive two, and monopolistic, one.

The power structures of three of the twenty-four districts were classified as segmented pluralism, six as competitive elite, nine as multigroup noncompetitive and six as monopolistic elite.

The Florida Scale of Civic Beliefs and the Educational Beliefs Scale included in the Appendices D and E to this report were utilized to determine the beliefs of samples of community influentials, teachers and registered voters in each district. The median belief score of each group in each district was determined on the liberal-conservative continuum for each of the following areas: civic beliefs, economic beliefs, school finance, responsibility for providing education, value of education, curriculum, and pupil discipline. The Pearson Product Moment Correlation between each area of beliefs was computed. The correlations are presented in Table 7-5.

In interpreting this table, it should be kept in mind that the higher the belief score, the more liberal the belief and the higher the typology score, the more competitive and pluralistic the power structure.

Examination of these correlation measures indicated several phenomena worthy of particular note. Whereas, only one of the measures was found to be statistically significant (the relationship between the beliefs about the value of education and the typology of local community power structure for the registered voters), several trends appeared in the data.

Table 7-5

Correlations Between Civic and Educational Beliefs and Typology of Local Community Power Structure*

Beliefs	Community Influentials	Teachers	Registered Voters
Civic	-.01	.12	.34
Economic	.29	.33	.18
Finance	-.03	.36	.23
Responsibility for providing education	-.30	-.03	.07
Value of education	-.31	.25	.38**
Curriculum	-.34	.29	-.14
Pupil discipline	-.16	-.25	.22

*The several measures of beliefs and typology of local community power structure were calculated using ranked data for civic and educational beliefs and for typology. Critical value for 0.05 level of significance was a calculated correlation measure of .3726. Positive relationships infer greater liberalism in the competitive districts. Negative relationships imply greater liberalism in the noncompetitive districts.

**0.05 level of significance.

Four of the correlation measures for the community influentials sample reflected a trend toward a relationship between the two variables. The trend for three of the measures reflected slightly more liberal civic and educational beliefs for the community influentials in the noncompetitive districts than in the pluralistic or competitive districts. The trends in the data for the sample of registered voters, however, indicated slightly more liberal beliefs for the registered voters in the more pluralistic districts than in the noncompetitive districts.

Extreme caution should be used in making inferences from the correlations presented in Table 7-5. The only statistically significant correlation found, that is the correlation of .38 between the beliefs of registered voters concerning the value of education and the typology of power structure, does not mean that either of these variables has a causal relationship to the other. For example, there was some evidence that the adult population had a higher educational level in the competitive, pluralistic districts than in the noncompetitive, monopolistic districts. People with a higher educational level might develop a more competitive, pluralistic power structure than a less well educated population. They would also place a higher value on education.

Although the correlations fall a little short of being statistically significant, it is strange to note from Table 1 that there is a tendency of the community influentials to express more liberal educational beliefs in the noncompetitive districts than in the competitive districts. Could it be that the teachers have not been as politically active in the noncompetitive districts as in the competitive districts and are therefore not seen as a threat by the community influentials in the noncompetitive districts? This would be an interesting question to explore.

The Relationship of Characteristics of Community Leaders to Typology of Power Structure[5]

The 24 districts selected for special study by methods described above were classified according to whether their power structures were

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[5] This section of the report was abstracted largely from a doctoral dissertation by William H. Bashaw entitled The Relationship of Characteristics of Community Leaders to Typology of Power Structure and Level of Financial Effort for Education in Twenty-Four Selected School Districts in Four States, (Gainesville, Florida, College of Education, University of Florida, 1968).

competitive or noncompetitive. The classifications of monopolistic and multigroup noncompetitive previously described in this report were combined into one group designated as noncompetitive power structure and the two groups competitive elite and segmented pluralism were combined into one group designated as competitive power structure. Using this two way classification, it was found that 15 of the 24 districts had noncompetitive power structures and 9 had competitive power structures.

Presthus' plan for classifying leaders as economic, political and specialist was utilized.

A number of hypotheses concerning the relationship of characteristics of community leaders to typology of power structure were examined. The findings with respect to these hypotheses are set forth below.

Hypothesis A. The percent of all leaders who are political leaders is greater in competitive districts than in noncompetitive districts.

There were 758 identified leaders in the 24 selected districts of which 56.9 percent were economic leaders, 24.4 percent were political leaders and 18.7 were specialist leaders. Table 7-6 shows the number of leaders in each occupational category in competitive and noncompetitive districts.

Table 7-6

Number of Leaders in Each Occupational Category in the 14 Noncompetitive and 10 Competitive Districts

Typology of Power Structure	Economic	Political	Specialist	Total
Noncompetitive	272	89	97	458
Competitive	159	96	45	300
Total	431	185	142	758

Table 7-7

Percent of Leaders in Each Occupational Category in Noncompetitive and Competitive Districts

Leadership Category	Competitive	Noncompetitive	Z Test	P
Economic	53.0	59.4	-1.74	<0.05
Political	32.0	19.4	3.96	<0.0005
Specialist	15.0	21.2	-2.15	<0.025

Table 7-7 shows the percent in each occupational category by typology of power structure. This table shows that 32.0 percent of all leaders identified were political leaders in districts having competitive power structures but only 19.4 of the identified leaders were political leaders in noncompetitive districts. The difference is highly significant statistically and therefore hypothesis A was confirmed. This significant difference in the percent of leaders who are political suggest that political issues are probably publicised more in the competitive districts than in the noncompetitive districts because more political leaders were available to debate the issues.

Hypothesis B. The percent of all leaders who are specialists is greater in noncompetitive districts than in competitive districts.

Table 7-7 shows 21.2 percent of the leaders were specialists in the noncompetitive and 15.0 percent in the competitive districts. This difference is statistically significant and therefore hypothesis B was confirmed.

Hypothesis C. The percent of all leaders who are economic is greater in noncompetitive districts than in competitive districts.

Table 7-7 shows that 59.4 percent of the leaders in the noncompetitive districts were classified as economic and 53.0 percent were classified as economic in the competitive districts. This difference is statistically significant and therefore hypothesis C was confirmed.

Hypothesis D. There will be no significant changes in the percent of leaders in each occupational category in the competitive and noncompetitive districts when only the 15 most influential leaders in each district are considered.

Table 7-8

Distribution of Occupations of Fifteen Highest Ranked Leaders in Each District By Competitive and Noncompetitive Power Structures

Typology of Power Structure	Economic	Political	Specialist	Total
Noncompetitive	137	57	31	225
Competitive	61	56	18	135
Total	198	113	49	360

Table 7-9

Percent in Each Occupation of Fifteen Highest Ranked Leaders in Each District By Competitive and Noncompetitive Power Structures

Occupation	Competitive	Noncompetitive	Z Test of Difference	P
Economic	45.2	60.9	2.90	<0.0025
Political	41.5	25.3	3.20	<0.001
Specialist	13.3	13.8	-0.13	N. S.

Table 7-8 shows the number in each occupational category when only the 15 highest ranked leaders in each district are considered and

Table 7-9 shows the percent in each occupational category. Table 7-9 shows that when only the 15 highest ranked leaders in each district are considered that the percent of economic leaders is significantly greater in the noncompetitive than in the competitive districts, that the percent of political leaders is significantly greater in the competitive than in the noncompetitive districts, and that there is no significant difference in the percent of specialists in the two types of districts. Therefore when only the fifteen ranked leaders in each district were considered, hypotheses A and C were confirmed but hypothesis B was not confirmed.

Hypothesis E. Leaders differ in certain personal characteristics in districts with competitive and noncompetitive power structures.

When data for all districts were combined, the following were found to be characteristic of leaders:

1. The average age of all leaders was 52.65 years.
2. The leaders had resided in their districts an average of 35.73 years, and 49 percent spent their entire lives in their districts.
3. The leaders had an average of 15.7 years of formal education.
4. The leaders had an average of 2.42 children, 57 percent of whom were still in school. Of the children, 11.51 percent were attending, or had attended at one time, a private school.
5. The Chamber of Commerce was the only organization in which more than half of the leaders held membership.
6. Leaders participated, on the average, in 51 percent of the identified issues in the districts.
7. Over 90 percent of the leaders were members of Protestant churches with 70 percent holding membership in the Methodist, Baptist, or Presbyterian church.

8. The number of adult relatives of leaders residing in the district showed wide variation. The average number, excluding the leader's own household, was 15.22.

Following is a summary of the findings with respect to the differences in personal characteristics of leaders in competitive and noncompetitive districts.

1. Ages of Leaders. The average age of leaders was about the same in competitive and noncompetitive districts.

2. Years Residence in District. Leaders in noncompetitive districts had resided in their districts for a significantly greater number of years than the leaders in competitive districts.

3. Years of Formal Education. No significant difference was found in the years of formal education of leaders in the competitive and noncompetitive districts.

4. Number of Children in School. Leaders in competitive districts had a slightly higher average number of children in school.

5. Original Residence of Leaders. The percent of the leaders who were born in the noncompetitive districts was significantly greater than in the competitive districts.

6. Membership in Community Organizations. More than 50 percent of the leaders in all of the 9 competitive districts and in 12 of the 15 noncompetitive districts were members of the Chamber of Commerce. In two of the competitive districts and six of the noncompetitive districts more than 50 percent of the membership belonged to the country club. More than 50 percent of the leaders belonged to a number of other organizations in a few districts; however, the only organization to which more than 50 percent of the leaders belonged in more than half

of the competitive or noncompetitive districts was the Chamber of Commerce.

7. Church Membership. No important differences were found in the church membership of the leaders in the competitive and noncompetitive districts.

8. Adult Relatives in the District. The leaders in the noncompetitive districts had a significantly higher average number of adult relatives living in their districts than the leaders in the competitive districts.

9. Participation of Leaders in Issues. The criteria for participation in issues were presented in an earlier section of this report. The percent of participation was calculated by dividing the number of leaders involved in each issue by the product of the number of leaders multiplied by the number of issues. It was found that the percent of participation in issues was significantly greater in the noncompetitive than in the competitive districts. This might suggest that political activity is more concentrated in a few people in noncompetitive districts than in competitive districts.

The Relationship of Certain Characteristics of Board Members and Superintendents to Typology of Power Structure

An analysis was made of the differences in the characteristics of board members and superintendents in districts with different types of power structures. Following is a brief summary of the findings of that study.

1. Board members in competitive districts tended to serve for shorter terms than board members in noncompetitive districts.

2. The tenure of superintendents was shorter in competitive districts than in noncompetitive districts.

3. There was no significant difference in the status and power of superintendents in competitive and noncompetitive power systems.

4. There was no significant difference in the community interaction patterns of superintendents in the two types of power systems.

Summary

Following is a brief summary of the findings reported in this chapter.

1. The Extent of Citizen Participation

a. Registered voters living under the competitive elite power structure participated to a greater extent than the registered voters living under the monopolistic power structure.

b. Citizens who belonged to various organizations participated to a greater extent than citizens who did not belong to organizations. This was especially true in the participation of females. This was true regardless of the power structure involved.

c. A greater percent of the registered voters belonged to various local organizations under the competitive elite power structure than those living under the monopolistic power structure.

d. Registered voters who belonged to organizations as well as those who did not belong to organizations participated to a greater extent in decision-making under the competitive elite power structure than their counterparts under the monopolistic power structure.

e. Professional workers, the self-employed, and managers of various companies were the most active participants in community decision-making regardless of the issue and power structure involved.

f. Age of participants, both male and female, did not seem to have much bearing on the extent of citizen participation under either type of power structure.

g. There were more apathetic registered voters living under the monopolistic power structure than under the competitive elite power structure.

h. A higher percentage of the citizens voted in making local decisions under the competitive elite power structure than under the monopolistic power structure.

i. Females, in general, tended to be more apathetic than males regardless of the power structure involved.

2. The Pattern of Participation

a. Registered voters who lived under the competitive elite power structure had a more active political pattern than those who lived under the monopolistic power structure.

b. Registered voters who lived under the competitive elite power structure had a pattern of participation which required higher costs in terms of energy, time, and money than those who lived under the monopolistic power structure.

c. Registered voters who lived under the competitive elite power structure had a pattern of participation which was more public than those who lived under the monopolistic power structure.

d. Registered voters who lived under the competitive elite power structure had a pattern of participation higher on the hierarchy of participation than those who lived under the monopolistic power structure.

e. The percent of gladiators was much higher under the competitive elite power structure than under the monopolistic power structure.

f. The percent of participants in the transitional category was much higher under the competitive elite power structure than under the monopolistic power structure.

g. There were more spectators living under the competitive power structure than under the monopolistic power structure because there were fewer apathetics.

h. There was much more participation which required the use of verbal and social skills under the competitive elite power structure than under the monopolistic power structure.

i. Age had very little, if anything, to do with patterns of participation under either type of power structure.

j. Organizational affiliation and occupation were as closely related to patterns of participation as they were to the extent of participation regardless of the power structure involved.

3. The Perceived Effectiveness of Voter Participation (Findings from an intensive study of two districts)

a. Registered voters who lived under the competitive power structure did not have a higher feeling of efficacy than those who lived under the monopolistic power structure.

b. The type of power structure under which a person lived and participated in making community decisions did not have any bearing on his feelings of effectiveness.

c. Registered voters, in general, did not feel as effective in their participation concerning school matters as they did in other levels of community government regardless of the power structure involved.

d. Registered voters who participated primarily as spectators perceived themselves as being just as effective as those who participated as gladiators regardless of the power structure involved.

e. There was no relationship found between patterns of participation and feelings of efficacy regardless of the power structure involved.

f. Occupation, organizational affiliation, and age did not seem to have any bearing on feelings of efficacy regardless of the power structure involved.

g. Apathetics had as high a feeling of efficacy as participants in community decision-making.

4. The Perceived Effectiveness of Voter Participation (Findings from a sampling study of 22 districts)

a. A random sample, 935 voters from the 22 districts were interviewed. A total of only 361 voters or 38.6 percent of the sample were actually living in districts with competitive power structures whereas 685 voters or 72.5 percent of the sample perceived that they were living in districts with competitive power structures. In contrast 574 voters or 61.4 percent of the sample were actually living in districts with noncompetitive power structures whereas only 257 voters or 27.5 percent perceived that they were living in districts with noncompetitive structures.

b. There was no difference in the feeling of voter efficacy of voters who resided in districts that actually had competitive power structures as compared with those who resided in districts that had noncompetitive power structures. However the voters who perceived that they lived in districts with competitive power structures had a significantly higher efficacy score than voters who perceived that they lived in districts with noncompetitive power structures.

c. The higher the level of political activity of voters, the greater the feeling of efficacy.

5. Civic and Educational Beliefs and Typology of Power Structure

Very little relationship was found between the civic, economic and educational beliefs of community influentials, teachers and registered voters and the typology of power structure. Only one statistically significant coefficient of correlation was found. The value placed on education by the registered voters was significantly higher in the districts with competitive power structures than in districts with noncompetitive structures.

6. Relationship of Characteristics of Community Leaders to Typology of Power Structure

a. The percent of all leaders who were political leaders was greater in the competitive districts than in the noncompetitive districts.

b. The percent of all leaders who were specialists was greater in the noncompetitive districts than in the competitive districts.

c. The percent of all leaders who were economic leaders was greater in the noncompetitive districts.

d. There was no difference in the average age of leaders in the competitive and noncompetitive districts.

e. Leaders in noncompetitive districts had resided in their districts for a significantly greater number of years than the leaders in competitive districts.

f. No significant difference was found in the formal education of the leaders in the two types of districts.

g. The percent of leaders who were born in the noncompetitive districts was significantly greater than in the competitive districts.

h. There was not much difference in the organizational memberships of the leaders in the two types of districts.

i. The leaders in the noncompetitive districts had a significantly higher average number of adult relatives living in their districts than the leaders in the competitive districts.

j. The average number of issues participated in per leader was significantly greater in the noncompetitive districts.

7. The Relationship of Certain Characteristics of Board Members and Superintendents to Typology of Power Structure

a. Board members in competitive districts tended to serve for shorter terms than board members in noncompetitive districts.

b. The tenure of superintendents was shorter in competitive districts than in noncompetitive districts.

c. There was no significant difference in the status and power of superintendents in competitive and noncompetitive power systems.

d. There was no significant difference in the community interaction patterns of superintendents in the two types of power systems.

CHAPTER 8

CONCLUSIONS AND RECOMMENDATIONS

The design of this research project, the hypotheses tested and the procedures used in carrying out the research were given in previous chapters of this report. Chapters 2 to 7 contain a detailed report of the findings and each chapter is terminated with a summary of the principal findings reported in that chapter. Furthermore, the report is preceded by a fairly extensive summary of the project. This chapter is designed to present certain conclusions, recommendations, and even speculations that are not emphasized elsewhere in this report.

The data for 122 districts in four states showed clearly that most districts in all four states followed similar financial effort patterns for 18 years. That is high financial effort districts in relation to the state median effort in general continued as high effort districts throughout the 18 year period studied, median effort districts were consistently median effort districts and low effort districts were consistently low effort districts. Most districts seem to have followed an orbital path or position in the "peck order" with respect to effort that they consistently followed. Why was this so? The research staff could not find any set of socioeconomic factors that at different time periods was consistently associated with fiscal policy. The typology of power structure, the civic beliefs of the registered voters and the community influentials and the leadership activities of superintendents all undoubtedly had some effect on the local school financial effort but those factors could not explain the consistentcy of the effort patterns of most school districts. Perhaps the explanation of the consistency among districts of effort patterns can be found in social systems theory. Conceivably most districts select for themselves a high, low, or median financial effort norm which represents their educational aspiration level. Once a district has established its effort norm, it seems difficult to change it. How does a district originally establish its aspiration norm for public education and what strategies can be used to change a community's low aspiration norm to a high aspiration norm? Much additional research is needed before substantive answers can be provided to these questions.

Despite the tendency of districts to maintain their effort patterns, seven districts among the 122 districts studied were identified that had drastically changed their effort patterns from low effort to high effort. In six of these seven districts, the economic leaders contributed substantially to bringing about the favorable change and the superintendents had major influence in bringing about change in four of the districts. Nevertheless, careful analysis of the case studies of these seven districts demonstrated that generalizations could not be made of those forces which contributed to the change in fiscal policy. In each school district a unique interaction of a set of forces linked to the change was noted.

Districts with competitive power structures tended to make a higher local financial effort in proportion to ability than districts with noncompetitive power structure. Furthermore, the community influentials and superintendents of schools participated more actively in the solution of community problems in districts with competitive power structures. Education seems to have been the beneficiary of more favorable financial decisions made by political processes in districts with competitive power structures. Do educational officials, organizations and leaders have more influence in districts with competitive power structures than in districts with noncompetitive structures? In other words is the educational power system more politically effective in districts with competitive power structures? This is quite possibly true. If a pluralism of competing power structures exists in a district, various power groups are forced to seek allies in order to be politically effective and the educational power system can be a very effective ally or an opponent to be respected. If a district has a powerful monolithic, noncompetitive power structure dominated largely by economic influentials, who needs to seek the support of the educational power system? Perhaps an effective strategy of the educational power system in a district with a noncompetitive power structure is to encourage the development of a competitive power structure by all legitimate means.

Not to be overlooked in leadership is the need to conceptualize motivational factors among community leaders and citizens that contribute to educational development. In this study much energy was invested in examining the relationship of civic and educational beliefs to school fiscal policies. Civic liberalism and conservatism appeared to have some relationship to differences in financial effort. The civic beliefs of groups in high effort school districts tended to be more liberal than the beliefs of persons in low effort districts. Educational beliefs did not indicate a consistent pattern. Should the strategies of schoolmen include techniques designed to change the civic beliefs of community influentials? What other factors contribute to the direction of behavior of community influentials? How are the beliefs of community leaders formed?

The low effort districts are in general "closed" social systems. The community influentials tend to be "locals" and they probably resist change. On the other hand, the competitive, high effort districts are "open" social systems and are receptive to change. The leadership structure is not dominated by "locals" as is characteristic of low effort districts. How can educational leaders change a community from a closed social system to an open social system? It is difficult for educational leaders to convert even closed school social systems into open systems. Perhaps a good strategy for an educational leader would be to attempt to open up a community which is a closed social system by first converting the school system into an open system. Can an open school system exist for a long period of time in a community which is largely a closed social system? Can school districts which are closed social systems be largely eliminated by consolidating them into larger districts? At this writing there are approximately 24,000 school districts in the nation. Could most closed social system districts be made open districts by reducing the number of districts to a total of from 2,000 to 2,500 in the nation? Can educators promote system openness by increasing citizen participation in school decisions?

The evidence presented in this report shows that in general the districts with the lowest per capita income make the least effort in proportion to their ability. This is the opposite of the trend among the states for, in general, the states with the least per capita income make the greatest effort in proportion to their ability. Are the states more open social systems than school districts? Or is it possible that community influentials find it more difficult to establish noncompetitive power structures at the state level than at local levels? There is a prevailing myth in the United States that the only truly democratic government is local government, that state government should be under suspicion, and that the federal government should be feared and resisted in most matters other than its activities in conducting the national defense, and protecting property and persons. Is this myth perpetuated by community influentials because they find it more difficult to control decision-making at the state and national levels than at the local level?

Will educational leaders be forced to seek the funds needed to finance schools at state and national levels rather than at the local level because of the difficulty of overcoming the influence of conservative community influentials and system closedness in many districts? Authorities on school finance recommend that both the states and the federal government participate substantially in the financing of public education in order to equalize educational opportunities and also in order to provide for more equitable system of taxation for school support. But these authorities also generally recommend that substantial local financial support be provided for public education in order to maintain local interest in the public schools and also in order to provide opportunities for local communities to make educational innovation and to move toward quality levels at the growing edge of education. Therefore local financial support for education remains an important consideration for those interested in educational progress.

Perhaps the difficulties of maintaining viable local financial support for education are not as great as suggested in the speculations set forth above. The evidence presented in this report does not indicate that community influentials are an "evil" influence in the community. On the other hand, community influentials are usually "solid" citizens who are potentially a powerful source of support for public education. The evidence presented in this report suggests that increasing the opportunities for interactions between the school social system and the power systems of the community may result in improved school support. Therefore it is recommended that school officials and educational leaders in many communities make greater use of ad hoc advisory committees comprised of both lay citizens and educators in making decisions on educational programs and policies. This strategy is designed to break down the boundaries between the school social system and community power systems by providing more opportunities for interaction among these systems. Such committees can also use consultants from outside the community in order to introduce new inputs into the community social system. It might well be that these strategies could result in increasing openness of the school social system and also the community power systems.

Much additional research needs to be done on the hypotheses examined in this project. The effective leaders of public education in the future will need to know a great deal about the politics of educational decision-making. With the passing of the years, it is becoming evident that an increasing percent of the gross national product will be expended in the public economy. The allocation of that part of the gross national product consumed by the government economy is accomplished by political processes and not by the market. Furthermore, the allocation of that portion of government expenditures devoted to public education is also accomplished by political processes.

There are some who dream that government budgets, including educational budgets will sometime be determined by scientific, rational methods based on planning, programming, budgeting systems utilizing systems analysis for determining the priorities to establish for optimizing returns from alternative inputs. The researchers on this project found no evidence that these methods are being used to determine the desired level of local school financing. The evidence produced in this study indicates that the level of local effort is determined largely by political decisions resulting from the interactions of power systems with each other, conditioned by the beliefs and value systems of the components of their environment and affected only occasionally at the present time by the activities of superintendents of schools. The educational leader of the future who desires to participate effectively in political decision-making on school finance and other educational policies will be well advised to become cognizant of the interrelationships of the many forces and factors affecting political decision-making on educational policies and programs.

It should not be assumed from the statements above that the writers imply that the methods of planning, programming, and budgeting and systems analysis are of little value to educational administrators. On the other hand the methods of scientific management should be fully utilized by educational administrators whenever applicable to educational problems. These methods can frequently be used in the planning process in developing plans proposed for political action. But the educational administrator cannot rely exclusively on the techniques of scientific management to obtain necessary political action on educational policies.

A final recommendation is that the power studies of the 24 selected districts be replicated in approximately ten years from the date from which they were made. There is some evidence that American society is becoming less monolithic and that pluralism with competing power structures is increasing. Only nine of the school districts selected for this study had competitive power structures and 15 had noncompetitive structures. Much useful evidence in the next ten years can be obtained by analyzing power changes within these districts and the factors that cause change. The subsystems of educational social systems are developing in strength and power, and to a certain extent this is increasing the pluralism within the educational social system itself. This indicates that the monolithic bureaucratic structure of the educational social system is gradually disappearing along with the monolithic noncompetitive community power structure. As pluralism develops both within the school social system and its environment, the processes of obtaining political consensus on educational matters will become more involved requiring a highly sophisticated educational leadership.

APPENDICES

APPENDIX A

Interview Guide A

As a part of our work at the University of Florida, we are making a study of leadership in this city.* To do this, some information is needed from a number of people like yourself who are actively informed about their city's affairs. All information given will be kept completely confidential. True names will not be used in our thesis nor will your personal opinions be revealed to anyone else. We need your frank opinions about county affairs and leadership. Your knowledge of the city will be of great help to us in our work.

****

What, in your personal opinion, are the most important issues (or problems or projects) of general concern that have been resolved within the past several years, or may have to be decided in the near future in this city?

---

*In the case of county school districts the term county was used on the interview form.

It is thought that some persons are more influential than others on city-wide issues.* What persons have the most influence or leadership on such issues as you have mentioned regardless of whether you agree with them?

NAME	COMMENT

---

*In county school districts county-wide was used.

In your opinion, what are the most important organizations in this city?

APPENDIX B

Interview Guide B*

Leadership Study**

As a part of our field work at the University of Florida, we are making a study of leadership in several representative Florida counties such as this one. To do this, some information is needed from a number of people like yourself who are actively informed about their county's affairs so that leadership activities can be summarized. Your views will be of great help in this study.

All information given individually will be kept completely confidential. True names are never used in the final analysis nor are your personal opinions revealed individually to anyone else, but it is necessary to ask you for your frank opinions about county affairs and the leadership that may have been involved.

*The field interview schedules were printed on legal sized paper with sufficient space to record all information requested. The interview guides for each school district were individually prepared from data collected on Interview Guide A. This sample is for illustrative purposes only.

**In the study of city school districts, the term city was used throughout the guide.

GENERAL INFORMATION

1. About how long have you lived in ____________________ County?

   All my life _____ Number of years _____ If not all of your life, where did you move from most recently? ___________________________

   Age bracket: 25-35 _____ 36-45 _____ 46-55 _____ 56-65 _____

   Over 65 _____

2. Do you have any children? Yes _____ No _____ Ages of children

   ____

   Schools now attended by children: Elementary _____ High School ___

   College _____ Public Schools _____ Private Schools (name) ________

   ____

3. Occupation ____

4. What amount of regular schooling have you completed?

   Grades 1 2 3 4 5 6 7 8 9 10 11 12

   College 1 2 3 4 Graduate Work _____ years

5. What organizations are you a member of?

   _____ Chamber of Commerce

   _____ Civitan

   ____________________ Church

   _____ Committee of 100

   _____ Country Club (name) ____________

   _____ Exchange Club

   _____ Kiwanis

   _____ Lions Club

   _____ Masonic Lodge

   _____ PTA

   _____ Rotary

   _____ Sertoma

   _____ Taxpayers Association

   _____ Yacht Club (name)

   ____

   _____ ___________________

   _____ ___________________

   _____ ___________________

6. Are you an officer or director of any of these organizations now?

   In the past? (Code: M = member; D = director; P, VP, S, T = officer)

   (Circle symbol if office was held in the past.)

7. What organizations have been most influential in solving county-wide problems? (Underline name of organization.) Why?

8. What other major official leadership positions do you now hold? (Elective or appointive offices, offices in firm or corporations, committee or commission appointments, etc.) Code: (a) public (b) private

9. What other major official leadership positions have you previously held? Code: (a) public (b) private

10. In this county about how many adult relatives do you have living outside your own household? ____________

EXTENT OF INFLUENCE OF LEADERS

In every county some people have more influence in county and city affairs than others. We would like the best judgment of people like yourself about the leadership you believe your fellow citizens are taking in county and city affairs.

We have talked to other persons in the county about leadership. They have given us a list of people whom they consider to be important on county-wide problems. We would like for you also to consider this list of names for us. You may think of someone else to add to this list.

Preliminary List of Leaders	Exceptionally Strong County-Wide Influence	Strong County-Wide Influence	Strong Local Community and Some County-Wide Influence	Local Community With Little County-Wide Influence	Little Influence
1.					
2.					
3.					
4.					
5.					
6.					
7.					
8.					
9.					
10.					
11.					
12.					
13.					
14.					
15.					

Preliminary List of Leaders	Exceptionally Strong County-Wide Influence	Strong County-Wide Influence	Strong Local Community and Some County-Wide Influence	Local Community With Little County-Wide Influence	Little Influence
16.					
17.					
18.					
19.					
20.					
21.					
22.					
23.					
24.					
25.					
26.					
27.					
28.					
29.					
30.					
31.					
32.					
33.					
34.					
35.					
36.					
37.					
38.					
39.					

Preliminary List of Leaders	Exceptionally Strong County-Wide Influence	Strong County-Wide Influence	Strong Local Community and Some County-Wide Influence	Local Community With Little County-Wide Influence	Little Influence
40.					
41.					
42.					
43.					
44.					
45.					

I. Which of the above persons do you feel you could count on most for support if you were interested in putting across a county-wide project? (Circle number before name.) Why?

II. Which of the above persons would be likely to cause you the most trouble in putting across a county-wdie project? (Check number before name.) Why?

III. Which of these persons have influence with state leaders through whom they can get things done for the county? (Place an asterisk behind names in the above list.) Examples:

IV. Do you consider any of the persons on the list as your "close friends"? (Place check mark after name.)

PROJECTS AND ISSUES

Issue No. 1

1. What persons or groups supported the various candidates?
2. What persons or groups opposed them?
3. Were there conflicting beliefs or philosophies involved in this election? If so, please describe them.
4. What was your position on this issue? How did you support your position?
5. Which leaders did you work closely with on this issue?

Issue No. 2

1. What person or persons initiated action on this proposal?
2. What person or persons opposed them?
3. What was your position on this controversy? How did you support your position?
4. Which leaders did you work closely with on this controversy?

Issue No. 3

1. What person or persons have taken leadership in this controversy?
2. What person or persons have opposed them?
3. What was/is your position on this issue? How did/do you support this position?

Issue No. 4

1. What person or persons initiated the proposal which brought on this controversy? What other persons were behind the proposal?
2. What person or persons opposed this proposal?
3. What was your position on this issue? How did you support this position?
4. Which leaders did you work closely with on this issue?

Of all the issues, projects, or problems with which you have been concerned, which one did you work the hardest to support or oppose?

Please give us a detailed account of how you influenced this decision. Whom did you first contact and with whom did you work closely on the project?

From your experience in observing leaders in this county, have you noticed any crowds that work together?

A. Who are the leaders in these crowds?

B. Are any of these crowds usually in opposition to each other? Have they competed strongly?

Generally speaking, what has been the role or function of the school board in some of the decisions? How much influence does the board have on such decisions? What is the image of the board when seen by county leaders?

What action has the county superintendent taken with respect to influencing decision-making?

Please give a typical example of how the superintendent works with leaders in educational decisions.

Which of the members of the school board has the greatest influence on school affairs? Why is he so influential?

Are there any problems that exist in the county that have been suppressed rather than allow them to become controversial issues? Why were they suppressed?

APPENDIX C

Questionnaire For School Districts

The questions below are designed to provide supplementary information for a major research project being done by the University of Florida. Please supply the appropriate response to questions and provide additional information about your school district as relevant.

1. Number of school board members? 3 _____ 5 _____ 7 _____ 9 _____
   Other (Please specify) _____
2. Are board members appointed _____ or elected? _____ If appointed, by whom and, briefly, by what procedure? ______________________________
   ____
   ____
   ____
   ____
3. What is the length of term of board members in years? 1 _____ 2 _____
   3 _____ 4 _____ 5 _____ Other (Please specify) _____
4. Do terms of office of board members overlap? Yes _____ No _____
5. If elected, do board members run on a party ticket? Yes ____ No ____
6. Please indicate the number of board members serving their:
   first term _____; second term _____; third term _____; fourth term or more _____
7. Since 1945, how many different persons have served as superintendent of your school district? _____ In the past ten years? _____
8. Of those serving in this capacity in the past ten years, how many have been residents of the district before serving as superintendent? _____
9. How long has the present superintendent served in your district? _____
10. In your estimation, have any significant shifts in interest group alignments of board members occurred in the past ten years? Yes ___ No ___

11. If yes, please describe them briefly. ______________________________

____

____

____

____

____

12. Is the board fiscally dependent _____ or independent _____?

13. What is the rate of school tax for operational expenses which the board has authority to levy without referendum vote? _____ Above this amount, what is the maximum rate with public approval? _____

14. What is the approximate percentage rate of teacher turnover in your district? _______ Of administrative turnover? _______

15. Are teachers represented by a strong teachers organization(s) in your district? Yes _____ No _____ If yes, is it an affiliate of the NEA ____, of the AFT ____, of both ____, or independent ____? Are administrative staff members included in the membership of such organizations? Yes _____ No _____

16. Does your school district have an established written policy on collective negotiations with teachers? Yes _____ No _____ An established informal policy? Yes _____ No _____

17. In the past ten years, has the board or the superintendent selected any standing citizens advisory committee(s)? Yes _____ No _____ If yes, for what purpose or purposes? ______________________________

____

____

____

____

18. In the past ten years, have any major ad hoc committees been appointed? Yes _____ No _____ If yes, for what purpose or purposes? ____

____

____

____

____

19. In the past ten years, have there been any major surveys of schools in your district? Yes _____ No _____ If yes, please describe briefly the nature of the survey(s) and by whom they were done, e.g., a building survey by state department of education, a general school survey by external professional group such as Peabody College, a curriculum study by citizens study group.

____

____

____

____

____

In the past ten years has there been any major dissatisfaction or attack on your school system from the general public, special interest groups, or members of the internal system? Yes _____ No _____ If yes, please describe briefly the nature of the dissatisfaction(s) or attack(s) and indicate what group(s) participated. ____

____

____

____

APPENDIX D

Items Used From The Florida Scale of Civic Beliefs

SA A N D SD 1. Socialized medicine would ruin medical standards and fill our nation with people having imaginary ailments.

SA A N D SD 2. The idea of equality should not be restricted to political equality.

SA A N D SD 3. Centralization of government tends to destroy the rights of the individual.

SA A N D SD 4. History shows that economic and social planning by governments does not necessarily lead to dictatorship.

SA A N D SD 5. Federal participation in local affairs can exist without undesirable federal control.

SA A N D SD 6. Moderates, who preach appeasement by urging us to give up our fight against centralized government and liberal constitutional interpretation, do so mostly for their personal political gain.

SA A N D SD 7. What a state does with its schools should be its business, not the Supreme Court's.

SA A N D SD 8. The most serious political issue of our day is the encroachment of the federal government upon states' rights.

SA A N D SD 9. Local government is grass-roots democracy at work and represents the voice of the people better than centralized government.

SA A N D SD 10. The federal government taxes the states and then sends this money back, minus what is wasted in Washington.

SA A N D SD 11. The federal government is often more representative of the people than some state governments.

*SA A N D SD 12. Free enterprise, with an absolute minimum of governmental control, is the best way to assure full productivity in our country.

*SA A N D SD 13. Private enterprise is the only really workable system in the modern world for satisfying our economic wants.

*SA A N D SD 14. When individual producers and consumers are left free to follow their own self-interest, natural economic laws operate to produce the greatest public good.

*Asterisk indicates items used to measure economic beliefs.

*SA A N D SD 15. The growth of our economy depends upon an increase in the activities of government to satisfy human wants as well as an increase in our private economy.

*SA A N D SD 16. The principle of free competition is a natural law which should govern our business system without governmental interference.

*SA A N D SD 17. Government regulation of the market should occur only in cases of monopolies such as public utilities.

SA A N D SD 18. We should get back to hard work to cure our country's ills.

*SA A N D SD 19. A growing national debt is nothing to worry about if the national income is growing at the same rate.

SA A N D SD 20. The price of aid to education, from a larger unit of government to a smaller one, is that the smaller one must do what it is told.

SA A N D SD 21. To keep taxes from rising is commendable but in reality taxes should be cut.

SA A N D SD 22. The government is doing things which we simply cannot afford at public expense.

SA A N D SD 23. Deficit spending is a bad public policy except possibly in time of war.

SA A N D SD 24. All government spending should be on a pay-as-you-go basis.

SA A N D SD 25. The government should meet the needs of the people, if necessary, through borrowing money or increasing taxes.

*SA A N D SD 26. Good financial principles for private enterprise are equally good principles for government.

SA A N D SD 27. Government spending is naturally wasteful.

SA A N D SD 28. We are spending more than the people can really afford to spend for government services.

SA A N D SD 29. The collecting and spending of tax money is most wasteful at the federal level, not so wasteful at the state level, and least wasteful at the local level of government.

SA A N D SD 30. Congress should accept the sensible virtue other businesses and individuals have learned--that of living within one's means.

SA A N D SD 31. Our government can and should do more to promote the general welfare.

SA A N D SD 32. Private enterprise could do better many of the things that government is now doing.

SA A N D SD 33. The best governed is the least governed.

SA A N D SD 34. Charitable services for those in need should be left to voluntary groups.

*SA A N D SD 35. Government in the United States is not the enemy of business.

SA A N D SD 36. Increased government services in the social welfare programs may increase an individual's freedom.

SA A N D SD 37. The Supreme Court has assumed powers not given to it by law or by custom.

SA A N D SD 38. Federal aid to schools, aid to the aged through social security, more stringent civil rights laws, and laws of like nature, are dangerously parallel to methods used in socialistic countries.

SA A N D SD 39. The government should increase its activity in matters of health, retirement, wages, and old-age benefits.

SA A N D SD 40. Some races are by nature inferior mentally, emotionally, and physically.

SA A N D SD 41. Unless we change social conditions, many children of minority groups will be unable to realize their full potentialities.

SA A N D SD 42. The United Nations has become an international debating society paid for by the United States.

SA A N D SD 43. Our foreign policy has been motivated too long by a spirit of do-goodism.

SA A N D SD 44. We could recognize nations such as Red China without implying that we approve of their forms of government.

SA A N D SD 45. Production is greatest in an economic system based upon competition and some pressure.

APPENDIX E

Developing the Educational Beliefs Scale*

The development of the Educational Beliefs Scale began initially with a pool of 170 items. These items were gathered from various publications. Other tests in education were consulted for leads in developing items. A wide variety of sources were utilized so that both the liberal and conservative viewpoints were well represented and clearly stated. Each of the items dealt with some phase of education, and the problems and/or issues confronting both the general public and professional educators.

The items were initially grouped under the following headings: (1) purposes of education, (2) learning process, (3) curriculum content, (4) responsibility for providing education, (5) instructional methods, (6) finance, (7) community participation, (8) administration, (9) teachers, (10) race, and (11) school organization. These 170 items were submitted to a group of some 30 professors in the Colleges of Education at the University of Florida, Auburn University, University of Tennessee, University of Georgia, and the University of Kentucky for their suggestions and criticisms. Several different departments in the colleges were represented. These persons were asked to indicate whether each statement was, in their opinion, a liberal or a conservative statement about education. From the initial pool of items, only those items were retained in which the judges indicated much agreement. The instrument included 86 items at this stage. These were put into an opinionnaire form and given to a pilot group of subjects.

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*This description (with alterations) was excerpted from the following source: Garnar V. Walsh, "A Comparison of Certain Civic and Educational Beliefs of Selected Groups in High and Low Effort School Districts in Florida"(doctoral dissertation, University of Florida, 1966).

The scale was given to a group of 100 teachers and 100 citizens. These subjects were selected in a random manner. Stratification of the sample was only on the basis of whether or not the subjects were citizens or teachers.

The items on the instrument were answered on a 1 to 5-point continuum. Answers ranged from "strongly agree" at one end of the continuum to "strongly disagree" at the other end. Answers were assigned a point score of 1 for a "strongly agree" answer and 5 for a "strongly disagree" answer to an item. Following the collection of the completed scales, cards were punched for the 709 Computer on the University of Florida campus, and the data were fed into the computer. The factor analysis by the computer indicated the following results:

1. Forty-three of the 86 items had factor loadings high enough to indicate that they should be retained for inclusion in the scale. Factor loadings ranged from a low of .51 to a high of .78, with nine items between .70 and .78. Eighteen items were between .60 and .69. Sixteen items were between .51 and .59.

2. Forty-three items were eliminated due to low factor loadings.

3. The 43 remaining items were grouped under a total of 21 separate factors. Upon further analysis of the results, the total number of factors was reduced from 21 to 12, thus eliminating nine factors and the items contained in each.

4. The results of the factor analysis indicated that the 12 factors obtained were separate and non-additive. The conclusion was reached that, at this point, people were responding in an inconsistent manner.

In order to further check the results of this first factor analysis, the data were rotated and fed into the 709 Computer. The results of this analysis were similar to those obtained in the first analysis. Twelve separate and non-additive factors were found. No factors dropped out as a result of this rotation, and no additional loadings were found on the other factors. It was apparent that the 34 items remaining on this scale needed further revision and refinement.

As a result of panel judgment, 25 of the 34 items remaining from the original scale were selected for inclusion in a second instrument. A total of seven new items were added, making a total of 32 items for the instrument. Of this total, 15 were considered to be liberal items as stated, and 17 were considered to be conservative items. This 32-item opinionnaire was given to 100 new subjects. These included citizens and teachers. Answers to each instrument ranged from "strongly agree" to "strongly disagree" on a 1 to 5-point continuum. Scoring was reversed for liberal and conservative items. An answer of "strongly agree" to a liberal item received a point score of 5. The same answer to a conservative item received a point score of 1.

The scales were collected, scored, and subjected to two statistical procedures. An item analysis of the scales was made followed by a factor analysis of those items which were not eliminated by the item analysis.

The two statistical procedures showed the following results:

1. The item analysis eliminated ten items of the 32-item instrument. These items had correlations ranging from -.86 to .37 and were discarded on this basis.

2. Correlation coefficients on 22 of the items ranged from .46 to .74, and the items were retained as a result.

3. Factor analysis of the remaining 22 items eliminated three more items, leaving 19 items from the 32-item instrument. Factor

loadings ranged from .48 to .80 on the negative side, with one between -.40 and -.49, two between -.60 and -.69, three between -.70 and -.79, and one between -.80 and -.89. Factor loadings ranged from .33 to .76 on the positive side, with one between .30 and .39, one between .40 and .49, five between .50 and .59, one between .60 and .69, and four between .70 and .79. The item test correlations and factor loadings for the 19 items retained in the test are shown in tabular form at the end of this discussion.

4. The items were found to be grouped into five separate factors. The total communalities of these factors were as follows:

Factor 1	3.1559
Factor 2	2.2846
Factor 3	1.9655
Factor 4	1.7758
Factor 5	2.2675

5. Each of the five factors contained items which dealt with a specific phase of education. Each factor was given a designation. The names of the factors and the number of items in each were as follows:

Factor 1	Finance	5 items
Factor 2	Responsibility for Providing Education	4 items
Factor 3	Value of Education	3 items
Factor 4	Curriculum	3 items
Factor 5	Discipline	4 items

6. Of the 19 items remaining as a result of the two statistical procedures, 12 items were considered to be conservative as stated. Seven items were considered to be liberal items as stated.

Means, Standard Deviations, Item Test Correlations, and Rotated Factor Loadings for 19 Items of the Educational Beliefs Scale

Mean[a]	S. D.		Item Test Correlations[b]	Rotated Factor Loadings[c]
2.87	1.26	1. The cost of education beyond high school should be largely financed by public funds.	.64	.57
3.41	1.30	2. All of the expenses of the child's schooling should be paid from public funds.	.46	.54
3.18	1.19	3. Basically, it should be the individual's responsibility to provide for his education.	.67	-.70
3.29	1.19	4. Much of the expenses for schools should be paid by parents.	.66	-.75
3.57	1.12	5. The higher the taxes for education, the less taxpayers have for food, clothing, and shelter.	.47	.67
2.46	1.04	6. When the school remains silent on social issues, it is not meeting its responsibilities.	.59	-.48
3.55	1.02	7. Schools should teach the fundamentals and leave social ideas to the home and church.	.62	.71

Mean	S. D.		Item Test Correlations	Rotated Factor Loadings
3.98	1.00	8. Grade schools should stick to the three R's.	.62	.56
2.82	1.15	9. Allowing children freedom in school encourages learning.	.55	-.66
3.37	1.01	10. The methods of discipline used in the schools around 1920 were more effective than methods used today.	.59	.60
3.39	1.13	11. Failure to heed the ancient rule "spare the rod and spoil the child" has increased juvenile delinquency.	.51	.33
3.72	.88	12. School people will just have to learn to get along without a lot of fancy buildings and equipment.	.53	.43
3.37	1.08	13. You should teach a child what he ought to know, rather than what he wants to know.	.62	.60
3.89	1.00	14. The people are being taxed to the limit for schools right now.	.68	.76
4.10	.79	15. Educational costs are too high and are completely out of line with other public services.	.55	.73
4.38	.69	16. School costs threaten to bankrupt the government.	.65	.77

Mean	S. D.		Item Test Correlations	Rotated Factor Loadings
2.18	.86	17. In the long run, the more money society spends for education, the more money people have to spend for other things.	.57	-.72
1.90	.83	18. Expenditures for education make a vital contribution to national defense.	.46	-.80
1.82	.74	19. In the long run, it will cost a community less to pay taxes for education than to pay taxes to support prisons and people on relief.	.48	-.61

---

[a] Item means and standard deviations are based upon five points for a strongly liberal response, four for liberal, three for neither liberal nor conservative, two for conservative, and one for a strongly conservative response. N is 100; 22 items on the scale.

[b] Tests scored as in "a" above; N is 100; 22 items on the scale.

[c] Items scored as in "a" above; N is 100; 22 items on the scale.

APPENDIX F

Raw Scores on Civic and Educational Belief Scales

Median Scores of Civic Beliefs

District		Community Influentials	Teachers	Registered Voters
McKinley	(Florida)	112	134	120
Everest	"	116	139	131
Logan	"	109	135	118
Whitney	"	113	136	116
Ranier	"	112	117	116
Shasta	"	98	144	103
Andrews	(Georgia)	122	133	119
Ford	"	117	138	117
Scott	"	115	135	115
Anderson	"	100	120	121
Benne	"	105	138	103
Carter	"	101	145	110
Oak	(Kentucky)	129	140	133
Pine	"	120	140	124
Cedar	"	115	132	115
Hub	"	126	140	128
Farm	"	134	131	118
Scenic	"	111	124	121
Allwin	(Illinois)	136	140	132
Brookston	"	123	152	133
Camelot	"	119	141	122
Marlboro	"	144	138	131
Tarreyton	"	112	135	129
Winston	"	138	137	131

Median Scores of Economic Beliefs*

District	Community Influentials	Teachers	Registered Voters
McKinley	--	--	--
Everest	25	30	28
Logan	23	30	--
Whitney	25	30	26
Ranier	25	28	26
Shasta	22	30	24
Andrews	--	--	--
Ford	--	30	27
Scott	--	--	--
Anderson	--	--	--
Benne	--	--	27
Carter	--	--	--
Oak	30	31	29
Pine	27	31	27
Cedar	24	30	28
Hub	30	32	29
Farm	--	30	28
Scenic	23	29	27
Allwin	28	30	28
Brookston	26	32	28
Camelot	26	31	27
Marlboro	25	30	27
Tareyton	26	29	29
Winston	31	30	30

*Data for some of the districts were not available at the time in which the economic beliefs were calculated.

Median Scores of Beliefs About Educational Finance

District	Community Influentials	Teachers	Registered Voters
McKinley	18	20	18
Everest	18	20	18
Logan	18	20	16
Whitney	19	20	16
Ranier	17	21	19
Shasta	17	20	17
Andrews	20	19	16
Ford	19	20	17
Scott	19	18	17
Anderson	18	19	19
Benne	18	19	18
Carter	18	17	16
Oak	20	21	17
Pine	18	20	18
Cedar	20	19	17
Hub	19	20	17
Farm	18	20	17
Scenic	18	19	15
Allwin	18	20	16
Brookston	18	20	17
Camelot	18	19	17
Marlboro	18	19	16
Tareyton	18	19	16
Winston	19	19	19

Median Scores of Beliefs About Responsibility For Providing Education

District	Community Influentials	Teachers	Registered Voters
McKinley	10	12	12
Everest	10	12	12
Logan	10	11	11
Whitney	12	12	11
Ranier	10	10	11
Shasta	9	12	12
Andrews	12	11	11
Ford	11	11	11
Scott	11	12	11
Anderson	10	11	11
Benne	11	12	11
Carter	11	12	11
Oak	12	11	10
Pine	10	11	11
Cedar	11	11	11
Hub	11	11	11
Farm	11	11	11
Scenic	11	11	11
Allwin	12	12	11
Brookston	11	12	11
Camelot	11	11	11
Marlboro	11	11	10
Tareyton	10	11	10
Winston	12	11	12

Median Scores of Beliefs About Value of Education

District	Community Influentials	Teachers	Registered Voters
McKinley	11	12	11
Everest	12	12	11
Logan	11	12	11
Whitney	12	12	11
Ranier	11	12	11
Shasta	11	11	11
Andrews	12	12	11
Ford	11	12	11
Scott	12	11	11
Anderson	11	12	12
Benne	11	12	11
Carter	11	11	11
Oak	11	12	11
Pine	11	12	11
Cedar	11	11	10
Hub	11	12	11
Farm	12	12	11
Scenic	11	12	11
Allwin	12	12	10
Brookston	11	12	11
Camelot	12	12	11
Marlboro	12	12	11
Tareyton	11	12	11
Winston	12	11	11

Median Scores of Beliefs About Curriculum

District	Community Influentials	Teachers	Registered Voters
McKinley	9	11	9
Everest	9	11	10
Logan	10	11	9
Whitney	10	12	9
Ranier	9	11	10
Shasta	10	11	8
Andrews	9	11	9
Ford	10	11	9
Scott	9	11	10
Anderson	9	11	10
Benne	9	11	10
Carter	9	11	9
Oak	10	12	10
Pine	10	12	11
Cedar	11	11	10
Hub	10	12	10
Farm	10	11	10
Scenic	10	11	10
Allwin	11	12	9
Brookston	10	12	10
Camelot	11	11	10
Marlboro	11	11	10
Tareyton	10	11	10
Winston	12	11	11

Median Scores of Beliefs About Pupil Discipline

District	Community Influentials	Teachers	Registered Voters
McKinley	10	12	10
Everest	10	12	11
Logan	10	12	10
Whitney	10	12	9
Ranier	10	12	10
Shasta	9	12	9
Andrews	12	13	11
Ford	10	11	10
Scott	10	12	10
Anderson	10	11	11
Benne	11	11	9
Carter	9	11	10
Oak	12	12	11
Pine	11	14	11
Cedar	11	13	11
Hub	11	13	11
Farm	11	12	11
Scenic	11	12	10
Allwin	11	12	11
Brookston	10	14	11
Camelot	11	12	11
Marlboro	12	12	12
Tareyton	10	11	10
Winston	12	13	12

APPENDIX G

Code: P. N. ______
L. N. ______
R. ______
D. ______
E. S. ______
Date: ______

Interview Guide C

Voter Participation Study

The University of Florida is studying the methods of citizen participation in decision-making in twenty-four districts in four states. To accomplish this, a carefully selected random sample of voters has been prepared from a list supplied by the Supervisor of Elections. This sample has been stratified statistically and represents the minimum number of voters that must be interviewed in each area of the district. Therefore, it is essential that each person selected respond if the results are to be valid. All information given will be kept completely confidential. Your name will not be used, nor will your personal opinions be revealed to anyone else. Your district will receive a code name so that it cannot be identified. Your frank opinion will be of great help to us in this study.

1. How long have you been a registered voter in this district?

_____ years

2. Sex: Male _____ Female _____

3. Age: a. under 31 _____ d. 51-60 _____

b. 31-40 _____ e. 61-70 _____

c. 41-50 _____ f. 71 or over _____

4. Marital status: a. _____ single b. _____ married c. _____ other

5. What was the last grade of school you completed? (Circle one)

Elementary	1	2	3	4	5	6
Secondary	7	8	9	10	11	12
College	13	14	15	16	17+	

6. What is your present occupation? (Spell out in detail indicating whether self-employed and/or managerial or non-managerial)

____

____

7. Do you belong to a civic club? Yes _____ No _____ If yes, name the club. ____

8. What other community organizations do you belong to? ____________

____

9. Can you recall, if so list, any major local issue, other than races for public office, requiring a vote of the people in the last five years? (An example might be a school bond issue.)

	Issue	I supported the issue	I opposed the issue	I was uncommitted
A.				
B.				
C.				
D.				

10. Can you recall, if so list, any major issue that did not require a vote of the people in the last five years? (An example might be school consolidation.)

	Issue	I supported the issue	I opposed the issue	I was uncommitted
A.				
B.				
C.				
D.				

11. Which political party do you belong to? Democratic _____

Republican _____ Other _____ None _____

12. Do you hold or have you held elected public office? Yes ____ No ____

13. Do you hold or have you held appointed public office?

Yes _____ No _____

14. Have you ever been a candidate for public office? Yes ____ No ____

15. Three issues that have occurred in your community are listed below. In terms of their effect on the whole community, which two would you consider the most important? (please circle)

	I supported the issue	I opposed the issue	I was uncommitted
1. Multi-City Merger			
2. Downtown Revitalization			
3. School Bond Issue			

16. If you identified issues above, did you participate in the issues in any of the following ways? (Check appropriate space)

Activity	Issue			Political Election		
	*1	2	3	Local Candidate	Last Gov's Race	Last Presid. Race
1. Solicit funds						
2. Attend caucus or strategy meeting						
3. Perform any of following:						
a. make speeches						
b. pass out literature						
c. donate time to headquarters staff						
d. work as a committee member						
e. make an effort to get people registered						
f. prepare registration lists						
g. arrange car pools for election day						
h. attend political meetings or dinners						
4. Donate money or other property						
5. Write letters to editor or public official						
6. Attend public hearings						
7. Use car sticker or wear button						
8. Attempt to talk another into voting a certain way						
9. Initiate a political discussion						
10. Vote (if appropriate)						

*Correspond to issues listed in question 15.

17. Which of the following statements best describes your community?

a. A small group of powerful leaders pretty much run local affairs and make most of the important decisions. ________

b. We have two or more groups of leaders in our community who pretty much run local affairs and make most of the important decisions. However, they generally agree on issues and we have very little public controversy over decisions. ________

c. We have two or more groups of leaders in our community who pretty much run local affairs and make most of the important decisions. They generally do not agree and we usually have public controversy over decisions. ________

d. Most issues are decided through our official public bodies, such as the city commission, school board etc. after public consideration through news media, civic clubs, party structure, etc. ________

18. Please answer the following questions:	Yes	No
a. Do you feel that people like yourself have no say about what local government does?	_____	_____
b. Do you feel that the only way you can have a say in government is by voting?	_____	_____
c. Do you feel that politics and government are too complicated for you to understand what is going on?	_____	_____
d. Do you feel that local public officials don't care much what you think about what is going on?	_____	_____

APPENDIX H

Doctoral Dissertations

1. Adams, Perry R. "Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Kentucky." Ed.D. dissertation, University of Florida, 1965.

2. Bashaw, William H. "The Relationship of Characteristics of Community Leaders to Typology of Power Structure and Level of Financial Effort for Education in Twenty-Four Selected School Districts in Four States." Ed.D. dissertation, University of Florida, 1967.

3. Davis, Julian M. "Relationship of Selected Socioeconomic Factors to School Fiscal Policy." Ed.D. dissertation, University of Florida, 1967.

4. Diffie, Granville P. "A Comparison of Certain Civic and Educational Beliefs of Selected Groups in High and Low Effort School Districts in Illinois." Ed.D. dissertation, University of Florida, 1966.

5. Easley, John W. "Comparative Characteristics of the Power Structures of Three Selected Georgia School Districts." Ed.D. dissertation, University of Florida, 1966.

6. Ficker, Victor. "Factors Contributing to Changes in Fiscal Support in Seven Selected School Districts." Ed.D. dissertation, University of Florida, 1967.

7. Harris, Marm M. "The Extent, Pattern and Perceived Effectiveness of Citizen Participation in Decision Making Under Two Different Types of Power Structures." Ed.D. dissertation, University of Florida, 1967.

8. Holden, Clarence. "A Comparison of Certain Civic and Educational Beliefs of Selected Groups in High and Low Effort School Districts in Kentucky." Ed.D. dissertation, University of Florida, 1966.

9. Hopper, Harold H. "Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Florida." Ed.D. dissertation, University of Florida, 1965.

10. Johns, Thomas L. "Analyses of Power Systems of Three Selected Low Effort School Districts in Kentucky." Ed.D. dissertation, University of Florida, 1967.

11. King, Charles R. "Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Georgia." Ed.D. dissertation, University of Florida, 1965.

12. Longstreth, James W. "The Relationship of Beliefs of Community Leaders, Teachers, and Voters to School Fiscal Policy and Typology of Community Power Structure." Ed.D. dissertation, University of Florida, 1967.

13. Marlantes, Leo. "Comparative Characteristics of the Power Structure of Three Selected Low Effort School Districts in Illinois." Ed.D. dissertation, University of Florida, 1966.

14. Marsh, William R. "Characteristics of the Power Structure of Six Florida School Districts Selected on the Basis of Population, Educational Effort, and Elasticity of Demand for Education." Ed.D. dissertation, University of Florida, 1965.

15. Moore, Euless B. "A Comparison of Certain Civic and Educational Beliefs of Selected Groups in High Effort and Low Effort School Districts in Georgia." Ed.D. dissertation, University of Florida, 1966.

16. Owens, David A. "Comparative Characteristics of the Power Structure of Three Selected High Effort School Districts in Illinois." Ed.D. dissertation, University of Florida, 1966.

17. Palmer, Richard D. "Comparative Characteristics of the Power Structure of Three Selected Low Effort School Districts in Georgia." Report compiled for U.S.O.E. Research Project 2842, 1966.

18. Quick, Walter J. "Socioeconomic Factors Associated With Patterns of School Fiscal Policy in Illinois." Ed.D. dissertation, University of Florida, 1965.

19. Scaggs, James L. "Interaction Patterns of Superintendents With Community Power Systems in Twenty-Four Selected School Districts." Report, University of Florida, 1967.

20. Shaffer, Robert L. "Comparative Characteristics of the Power Structure of Three Selected High Effort School Districts in Kentucky." Ed.D. dissertation, University of Florida, 1966.

21. Walsh, Garnar V. "A Comparison of Certain Civic and Educational Beliefs of Selected Groups in High Effort and Low Effort School Districts in Florida." Ed.D. dissertation, University of Florida, 1966.

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